

# Report of the WOAAH Scientific Commission for Animal Diseases

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Founded as OIE

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A meeting of the WOAHA Scientific Commission for Animal Diseases (the Commission) was held from 19 to 23 September 2022 in Paris.

## **1. Welcome**

Dr Montserrat Arroyo, Deputy Director General (International Standards and Science, DDG ISS) welcomed members of the Commission to this third meeting of its three-year term.

Dr Arroyo updated the Commission on rebranding activities for the Standards resulting from the May 2022 change in the World Organisation for Animal Health's acronym from 'OIE' to 'WOAH'. An explanatory note was included in the forewords of the 2022 editions of the *Terrestrial* and *Aquatic Animal Health Codes*. Reference to 'WOAH' instead of 'OIE' will be applied on a chapter-by-chapter basis as these are updated. Dr Arroyo also provided an update on WOAHA digitisation strategies and noted the Commission's efficient use of the new tools provided during the last two meetings. She also described the development of a navigation tool for online Standards for more efficient searches, which will be piloted in early 2023.

Dr Arroyo updated the Commission on the plans for the 90<sup>th</sup> WOAHA General Session (May 2023) which is currently planned as an in-person meeting with fewer attendees than was the case prior to the COVID-19 pandemic. WOAHA plans to continue the pre-General Session webinars.

Dr Arroyo noted the importance of having Members submit details of their experts to WOAHA for potential participation in *ad hoc* Groups to expand WOAHA's network and achieve broader representation. It has been a challenge to have global representatives in *ad hoc* Groups, and Members may have experts who are not currently in WOAHA's network. She encouraged the Commission members to engage with the Regional Representatives to increase their understanding of the Commission's activities.

The members of the Commission thanked Dr Arroyo for the excellent support provided by the Secretariat. They highlighted the continued improvement in the quality of the working documents provided, especially the background information and specific questions posed for Commission attention. They appreciated the ongoing efforts made to manage their workload, but noted that prioritisation alone does not solve the problem when the quantity of 'must do' items continues to increase.

## **2. Meeting with the Director General**

Dr Monique Eloit (WOAHA Director General) met with the Commission on 20 September 2022 and thanked the members for their continued support and commitment to achieving WOAHA objectives. She thanked the members for their continued commitment, acknowledging their heavy workload and expressed her hope that the return to the in-person meeting format would facilitate the Commission's deliberations. Dr Eloit extended thanks to the members' employing institutions and national governments.

Dr Eloit commended the members for their work in ensuring that WOAHA standards are based on the best available science, and emphasised the importance of continuing to provide a clear rationale and supporting justification for recommendations made.

The Commission thanked Dr Eloit for making time to meet with members and again expressed the Commission's appreciation of the work of the Secretariat in preparing for and supporting the meeting.

## **3. Adoption of the agenda**

The draft agenda was adopted by the Commission. Facilitation of the meeting was shared between the Commission's Bureau (Drs Zepeda, de Clercq, and Drew) and the WOAHA Secretariat acted as rapporteur. The agenda and list of participants are attached as Annexes 1 and 2, respectively.

## **4. Feedback from the 89th General Session**

The Commission was updated on the key outcomes from the 89<sup>th</sup> General Session held May 2022.

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## 5. Terrestrial Animal Health Code

### 5.1. Member comments received for Commission consideration

#### 5.1.1. Chapter 8.14 – Infection with rabies virus

In response to circulation of the revised *WOAH Terrestrial Code* Chapter 8.14. by the Terrestrial Animal Health Standard Commission (Code Commission) after their February 2022 meeting, Member comments were received regarding the proposed reduction in the waiting period after detection of antibodies from 3 months to 30 days for the importation of vaccinated dogs from infected countries or zones. It was noted that the waiting period had been assessed by the European Food Safety Authority (EFSA); based on this assessment<sup>1</sup>, it was recommended that the current waiting period of a minimum of 3 months be maintained.

The Commission reviewed the Member comments on this issue, the EFSA assessment, and the response to these provided by WOAHP Rabies Reference Laboratory Network (RABLAB). The Commission noted that the EFSA assessment parameterised their model with the incubation period and thus considered a waiting period from time of exposure rather than from time of antibody detection as required by the provision of the *Terrestrial Code*. This could explain why the model's risk estimation is not in line with either empirical observations, or other peer-reviewed publications.

The Commission emphasised the experimental data that demonstrates that rabid dogs that develop antibodies die on average 7 days after antibody detection (range, 0 to 13 days) [1,2]. Therefore, a waiting period after detection of antibodies of at least 30 days will eliminate any residual risks of legally importing rabid dogs that are incubating the disease.

Finally, the Commission noted that a Member can require a waiting period of more than 30 days if supported by a risk assessment.

The opinion of the Commission together with the RABLAB rationale were forwarded to the Code Commission for consideration.

#### References

1. Crozet G., Rivière J., Rapenne E., Cliquet F., Robardet E. & Dufour B. – Quantitative risk assessment of rabies being introduced into mainland France through worldwide noncommercial dog and cat movements. *Risk Analysis*, n/a (n/a). doi:10.1111/risa.13976.
2. Smith T.G., Fooks A.R., Moore S.M., Freuling C.M., Müller T., Torres G. & Wallace R.M. (2021). – Negligible risk of rabies importation in dogs thirty days after demonstration of adequate serum antibody titer. *Vaccine*, 39 (18), 2496–2499.

#### 5.1.2. Chapter 11.4. Bovine spongiform encephalopathy

The Commission considered specific questions received from Members, and forwarded by the Code Commission in relation to the official recognition and maintenance of BSE risk:

##### Listing of atypical BSE

Based on current knowledge of atypical BSE, accumulated over several years, the Commission was of the opinion that this agent does not meet the listing criteria of Article 1.2.2. of the *Terrestrial Code*. Indeed, the experimental transmission of atypical BSE has been demonstrated in a single animal, in a single study (see the *ad hoc* Group meeting report of March 2019), and despite the ongoing consultation on this issue, there is no further evidence of experimental transmission and still no field evidence of transmission of atypical BSE. Following the established SOP the evaluation against the listing criteria was conducted during the meeting (see Item 12.2.3.2 of this report).

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<sup>1</sup> European Food Safety Authority (EFSA), Alvarez J., Nielsen S.S., Robardet E., Stegeman A., Van Gucht S., Vuta V., Antoniou S., Aznar I., Papanikolaou A. & Roberts H.C. (2022). – Risks related to a possible reduction of the waiting period for dogs after rabies antibody titration to 30 days compared with 90 days of the current EU legislative regime. *EFSA*, 20 (6). doi:10.2903/j.efsa.2022.7350.

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The Commission emphasised that whilst to date there is no evidence that atypical BSE is transmissible under natural conditions, the potential for recycling of the atypical BSE agent cannot be ruled out and should be avoided. Therefore, the Commission recommended that countries having an official BSE risk status by WOAHP should continue reporting cases of atypical BSE as part of their annual reconfirmation, as a means of monitoring the occurrence of atypical BSE.

#### The inclusion of atypical BSE in the exposure assessment of the revised Chapter 11.4 of the *Terrestrial Code*

The Commission considered that there is still no evidence that atypical BSE is an indicator of a BSE agent being recycled in a cattle population. This is further reinforced by the impact assessment of negligible risk Members/zones.

The Commission noted that the likelihood of recycling and amplification of the BSE agent (either classical or atypical) if it were present in the cattle population could be considered negligible, on the basis of the livestock industry practices and/or the risk mitigation measures in place, for all Members or zones currently having a BSE risk status. The Commission was of the opinion that the control measures in place for mitigating the risk of classical BSE would also likely be relevant to prevent recycling and amplification of atypical BSE in a cattle population. This was further confirmed by the comprehensive description of livestock industry practices, including slaughtering, rendering and feed mill practices, provided by Members whose BSE risk status was assessed by the *ad hoc* Group on the impact of that revision of BSE standards on the official BSE risk status and the maintenance of official BSE risk status of Members.

Thus, the Commission concluded that atypical BSE should not be considered as part of the exposure assessment in Article 11.4.2 of the revised BSE Chapter 11.4 of the *Terrestrial Code*.

Considering the aforementioned points particularly related to transmission of atypical BSE in a single animal in a single experimental study and lack of evidence of field transmission, the Commission proposed that the references to atypical BSE in the draft Chapter 11.4. should be revised.

#### Guidelines on BSE surveillance

The Commission was informed that the BSE surveillance guidelines are currently being developed and will be peer-reviewed by an *ad hoc* Group before the end of 2022. The Commission took note that the BSE surveillance guidelines will be presented to the Commission for review and endorsement at its February 2023 meeting.

Further details can be found in the Code Commission's September 2022 meeting report.

## **5.2. Other considerations**

### **5.2.1. Chapter 4.7.7. Containment zone**

With reference to proposed text shared by the Code Commission after its September 2021 meeting, the Commission had agreed at its last February 2022 meeting regarding the time limit of 24 months for a containment zone. The Commission noted that, regarding diseases for which WOAHP grants an official animal health status, within this time period, a Member should either apply for the recovery of free status of the containment zone or for the official recognition of free status of the zone outside the containment zone, if the conditions for the recovery of free status of the containment zone will not be met. In the latter case, the process for official recognition by WOAHP should be followed in accordance with Chapter 1.6. and the relevant disease-specific chapters. The Commission clarified that, should the recovery of the free status of the containment zone or the recognition of free status of the zone outside the containment zone not be achieved within this time limit, the officially recognised status of the country or zone would be suspended. The Commission stressed that a Member having a containment zone approved by WOAHP should consider the most appropriate approach to follow as early as possible to ensure the timely implementation of the necessary activities and to avoid suspension of its status. The opinion of the Commission was forwarded to the Code Commission.

### **5.2.2. *Mycobacterium tuberculosis* complex**

In February 2021, the Commission confirmed its previous decision not to delist *M. tuberculosis* based on the rationale provided by the experts that it meets the listing criteria described in the WOAHP *Terrestrial Code* Chapter 1.2. The Commission also considered the proposal by experts to revise the case definition for infection with *Mycobacterium tuberculosis* complex (MTBC) in the WOAHP *Terrestrial Code* Chapter 8.11.,

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recommending that the notification not be restricted to *M. bovis*, *M. caprae*, and *M. tuberculosis sensu stricto*, but be expanded to include notification of infection by any member of the MTBC (except vaccine strains) as described in the *WOAH Terrestrial Manual*.

At its February 2022 meeting, the Code Commission agreed to retain *M. tuberculosis* in Chapter 8.11. as part of the *M. tuberculosis* complex. However, the Code Commission disagreed with the proposal to expand the scope of Chapter 8.11. to include any mammalian tuberculosis agents, explaining that the case definition in a disease-specific chapter should refer only to listed pathogenic agents, based on fulfilment of all the criteria in Chapter 1.2.

The Commission noted Code Commission's decision to not expand the scope of Chapter 8.11., and concluded that the *Standard Operating Procedure for Listing Decisions for Pathogenic Agents of Terrestrial Animals*<sup>2</sup> provides the appropriate mechanism for future adjustment of the definition of MTBC to include agents of mammalian tuberculosis in addition to *M. bovis*, *M. caprae*, and *M. tuberculosis (sensu stricto)*.

## **6. Ad hoc and Working Groups**

### **6.1. Meeting reports for endorsement**

#### **6.1.1. Ad hoc Group on the revision of BSE standards and the maintenance of official BSE risk status: 22-24 June 2022**

The Commission reviewed the report of the *ad hoc* Group on the revision of BSE standards and the maintenance of official BSE risk status, which was a continuation of the work of the *ad hoc* Group on the revision of BSE standards and the impact of this revision on the official status recognition in June/July 2021, followed up by the assessment of annual reconfirmations by the Commission in its February 2022 meeting (see Items 4.1.3. of the September 2021 and 6.4.2. of the February 2022 meeting report of the Commission).

The Commission agreed with the conclusion of the *ad hoc* Group that the exposure risk (i.e., likelihood of recycling and amplification of BSE agent, if it were present in the cattle population) of one Member having a negligible BSE risk status could be considered negligible. The Commission noted that for the other two Members having a negligible BSE risk status, the *ad hoc* Group could not reach a conclusion at its meeting and further information was requested and submitted by these Members after the meeting. The follow-up assessment by the *ad hoc* Group was reviewed by the Commission (see Item 7.4.2 of this report).

The endorsed report of the *ad hoc* Group is available on the WOA website [here](#).

### **6.2. Planned ad hoc Groups and confirmation of proposed agendas**

With regard to the *ad hoc* Groups on the evaluation of animal health status and official control programmes for WOA endorsement, the Commission was briefed on the proposed agendas including information on the applications submitted to the WOA so far. These *ad hoc* Group meetings are planned to take place virtually this year.

#### **6.2.1. Ad hoc Group on the evaluation of AHS status: 28–30 September 2022 (cancelled)**

#### **6.2.2. Ad hoc Group on the evaluation of BSE risk status: 4–6 October 2022 (cancelled)**

#### **6.2.3. Ad hoc Group on the evaluation of PPR status: 19–21 October 2022**

#### **6.2.4. Ad hoc Group on the evaluation of FMD status: 2–4, 7 and 9 November 2022**

#### **6.2.5. Ad hoc Group on the evaluation of the endorsement of dog-mediated rabies control programmes: 8–10 November 2022**

#### **6.2.6. Ad hoc Group on the evaluation of CBPP status: 16 November 2022**

#### **6.2.7. Ad hoc Group on the evaluation of CSF status: 5–7 December 2022 (to be confirmed)**

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<sup>2</sup> [https://www.woah.org/en/document/sop\\_fordelisting\\_pathogens\\_for\\_terrestrial\\_animals\\_oct2020/](https://www.woah.org/en/document/sop_fordelisting_pathogens_for_terrestrial_animals_oct2020/); accessed 24 September 2022.



#### 6.2.8. *Ad hoc* Group on the review of BSE surveillance guidelines: 25 October 2022

The Commission was informed of an *ad hoc* Group that would be convened to peer-review the draft BSE surveillance guidelines to support WOAHA Members in the revision of their surveillance programmes in accordance with the revised BSE standards. The Commission reviewed and endorsed the Terms of Reference of this upcoming *ad hoc* Group meeting and noted that the draft guidelines would be forwarded to the Commission for its revision and endorsement at the February 2023 meeting.

#### 6.3. Meeting reports for information

None at this meeting.

### 7. Official animal health status

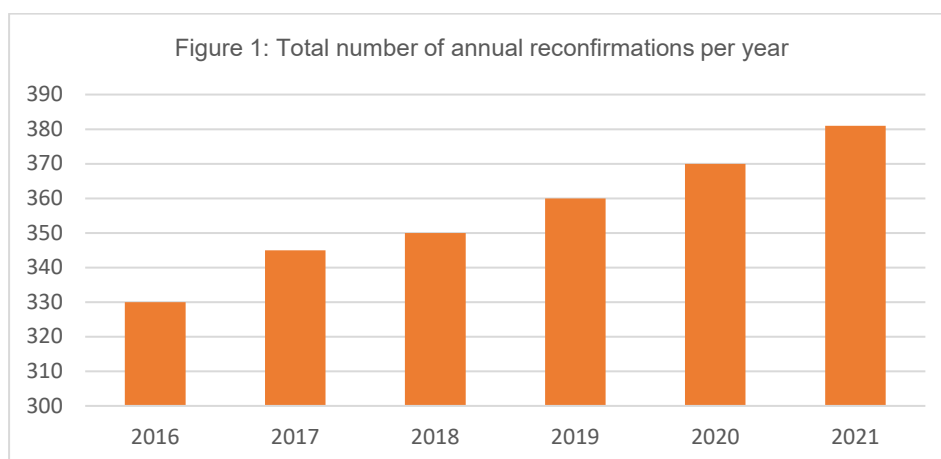
#### 7.1. Annual reconfirmations for maintenance of status

##### 7.1.1. Selection of status for comprehensive review of 2022 annual reconfirmations

The Commission selected the list of Members' 2022 annual reconfirmations for comprehensive review during its forthcoming meeting in February 2023. The selection was based on a set of criteria described in the SOPs. The Commission will comprehensively review a total of 48 annual reconfirmations during its February 2023 meeting. The Members selected for comprehensive review of their annual reconfirmations will be notified officially by letter from WOAHA in October 2022.

##### 7.1.2. Strategy for the assessment of increasing annual reconfirmations

Since the annual reconfirmation campaign of 2016, the Commission has been comprehensively reviewing a selection (approximately 10%) of annual reconfirmations for officially recognised status following the criteria established in Annex 2 of the Standard Operating Procedure on the reconfirmation (Reconfirmation\_SOP), and all annual reconfirmations of Members having an endorsed control programme. Based on a constant annual increase (annual rate of 5%) in the number of Members and zones with an officially recognised status and Members having an endorsed control programme (see Figure 1) the number of annual reconfirmations comprehensively reviewed by SCAD has also increased over the past years.



The Commission underlined the importance and effectiveness of this procedure and agreed with the temporary working strategy proposed by the Secretariat for revising the annual reconfirmation dossiers during the months prior to the February meeting. Nonetheless, the Commission strongly encouraged the revision of the format of the annual reconfirmations reducing the amount of information submitted and time spent on screening them. This should be in line with the timeline and progress of the harmonisation of the *WOAH Terrestrial Code* provisions for recognition and maintenance of official status (so far, CSF and PPR completed, ongoing for AHS, CBPP, FMD and BSE), as well as the planned development of an online platform for official animal health status management.

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## 7.2. Specific update on official animal health status

### 7.2.1. Update on situation of countries/zone with suspended or reinstated disease status

The Commission noted the following suspension of official status since its last February 2022 meeting.

- Indonesia (FMD)

Following the notification of an outbreak of FMD in Mojokerto, Sidoarjo, Gresik, and Lamongan districts in the province of Jawa Timur, the “FMD free country where vaccination is not practised” status of Indonesia was suspended with effect from 12 April 2022.

- Kazakhstan (FMD)

Following information received from Kazakhstan regarding the start of vaccination against FMD, the “FMD free zone where vaccination is not practised” status of Zone 1 (consisting of West Kazakhstan, Atyrau, Mangystau and south-western part of Aktobe region), Zone 2 (including north-eastern part of Aktobe region, southern part of Kostanay region and western part of Karaganda region), Zone 3 (including northern and central parts of Kostanay region, western parts of North Kazakhstan and Akmola regions) and Zone 4 (including central and eastern parts of North Kazakhstan region and northern parts of Akmola and Pavlodar regions) was suspended with effect from 9 June 2022.

- Kazakhstan (CSF)

Following the assessment by the Commission of the information provided by Kazakhstan regarding the importation of vaccinated pigs in the country, the “CSF free status” of Kazakhstan was suspended with effect from 14 June 2022.

- Botswana (FMD)

Following the notification of an outbreak of FMD in Butale crush, Masungu, the “FMD free zone where vaccination is not practised” status of Zone 6b of Botswana, consisting of part of Francistown was suspended with effect from 18 August 2022.

## 7.3. State of play and prioritisation of expert mission to Members requested by the Commission

### 7.3.1. Follow-up of past missions/virtual interviews

The Commission considered the detailed report of the FMD mission conducted in June 2022 to assess compliance by Türkiye with the relevant provisions of the *WOAH Terrestrial Code* for the maintenance of its ‘FMD free zone where vaccination is practised’ status. The Commission commended the mission team for the thorough assessment undertaken in the limited time of the mission. The Commission also commended Türkiye for their continuous collaboration in explaining how the measures in place could achieve the same level of risk mitigation as required in Chapter 8.8. in relation to the movements of ruminants from the FMD-infected zone (Anatolia) into the free zone (Turkish Thrace) for the specific event of the Kurban festival. The Commission welcomed the fact that Türkiye had already started implementing the recommendations of the mission team. The Commission agreed that the ‘FMD free zone where vaccination is practised’ status of Türkiye should be maintained provided that Türkiye submits an action plan describing the activities conducted to ensure the implementation of the recommendations of the mission in preparation of the next Kurban festival of 2023, when reconfirming its status in November 2022. The Commission stressed that, as an additional guarantee, Türkiye should display in this plan its commitment to progress along the Progressive Control Pathway for FMD (PCP-FMD) in the infected zone to reach Stage 3 of PCP, and strongly encouraged the submission of its official control programme for endorsement by WOA.

### 7.3.2. State of play and prioritisation

The Commission reviewed and prioritised the missions for the maintenance of disease status and the endorsement of official control programmes to be undertaken, considering the priority issues identified by the Commission when reviewing the annual reconfirmations submitted in November 2021 as well as recent changes in the epidemiological situation in certain regions. The prioritised list of missions will be confirmed following consultation with the Director General of the WOA.

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#### **7.4. Standards and procedures related to official status recognition**

##### **7.4.1. Questionnaire and procedure for recovery of free status, or risk assessment, in case of recurrence of rinderpest**

The Commission reviewed the questionnaire template for recovery of rinderpest-free status as well as the risk assessment questionnaire, to be submitted to WOAAH by countries in the event of re-emergence of rinderpest, developed by WOAAH in collaboration with a consultant. The Commission endorsed the two documents with some proposed modifications. The Commission was of the opinion that, should a rinderpest outbreak reoccur, Members without a case should provide their risk assessment to WOAAH as soon as possible and within two months at the latest, considering the urgent need to identify countries at a heightened risk in such case.

The relevant questionnaires are available on the WOAAH website [here](#).

##### **7.4.2. Follow-up on the impact assessment related to the revised BSE standards and list of countries already having an official risk status by WOAAH**

Following the revision of the report of the *ad hoc* Group on the revision of BSE standards and the maintenance of official BSE risk status (see Item 6.1.1 of this report), the Commission discussed electronically the final assessment of the *ad hoc* Group and concurred with its conclusion that the exposure risk for these two Members could be considered negligible, mainly due to their livestock industry practices. The Commission agreed to forward the recommendations of the *ad hoc* Group to the three Members concerned.

The Commission commended the work conducted by the members of the *ad hoc* Groups since June 2021 and appreciated the efforts made by the three Members in providing the information requested in a timely manner and acknowledging the purpose of the work.

##### **7.4.3. Development of the Official Status Management Platform**

The Commission received an update on the development of an online platform dedicated to official status management that is aimed to serve as a secure centralised system to archive, track, search, and submit all relevant dossiers related to the official recognition and maintenance of animal health status, and self-declarations of disease freedom. The Status Department explained that the objective of this platform is to facilitate the exchange between WOAAH and Members as well as to provide easy but secure access to their respective documents and reports in relation to the procedures of official recognition and maintenance of animal health status, and self-declarations of disease freedom, and also to allow sharing of all relevant guidance related to these procedures. The Commission welcomed this development which is at the initial stage of selecting a tender.

#### **8. Global control and eradication strategies**

##### **8.1. Peste des Petits Ruminants. Global Control and Eradication Strategy**

The Commission was informed on the recent activities of the PPR Global Control and Eradication Strategy (GCES).

The Commission was updated on the progress of the review and formulation of the second phase of the PPR Global Eradication Programme (GEP II) undertaken by the joint WOAAH/FAO PPR Core Expert Team (PPR CET) based on feedback received from all regions globally during respective consultation meetings. In parallel, monitoring and evaluation experts from WOAAH and FAO supported the development of the draft programme theory of change and logical framework. The finalised draft now known as “Blueprint towards Peste des Petits Ruminants Global Eradication by 2030 (PPR GEP II & III)” has been submitted to the management of WOAAH and FAO for validation. As a next step, if the document is validated, it will be shared with small ruminants’ stakeholders during the stakeholder virtual meeting to be held from 11 to 13 October 2022. If validated, the formal launch of the document is expected on 4 November 2022.

The revised PPR Monitoring, and Assessment tool (PMAT) has been undergoing the final validation by the management of WOAAH and FAO and is envisaged to be published by the end of 2022. To support the efficient use of the PMAT document, an online tutorial has been proposed for development.

The Commission was also informed that three PPR roadmap coordination meetings were held in 2022. The “PPR Control and Eradication Strategy follow up meeting for the Gulf Cooperation Council (GCC) States and Yemen” was held virtually from 1 to 3 March 2022 and the 3rd PPR Regional Roadmap meeting for the SADC Region was held in

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Gaborone, Botswana from 12 to 14 September 2022. While both meetings undertook to take stock of the progress countries in these regions have achieved towards PPR eradication, among the meeting objectives was also to raise awareness of the WOAHP procedure for official recognition of PPR free status among countries that have never reported PPR. The third meeting, a “Consultative Seminar on Progress Made in the FMD and PPR Regional Roadmap for East Mediterranean Countries” was organised for Middle East countries (Lebanon, Egypt, Sudan, Jordan, Iraq and Syria) in Beirut, Lebanon from 11 to 13 September 2022.

Finally, the Commission noted that, under the WOAHP Action plan in support of PPR GEP, a virtual regional training workshop was conducted on the WOAHP procedures for the endorsement of official control programmes with regard to PPR and dog-mediated rabies from 4 to 6 2022, as both these diseases are considered of interest for the WOAHP Members of the Africa region.

The Commission acknowledged the significance of the activities towards PPR eradication considering the impact of the disease on pastoral and rural communities which rely on small ruminants for their livelihoods and in particular on women and youths who are often in charge of keeping small ruminants. Nevertheless, the Commission noted that most of the PPR endemic countries have not achieved much progress along the PPR strategy stepwise approach in the recent years and emphasised the need for Members to demonstrate their commitment in this regard.

## **8.2. African swine fever. Global control initiative**

The Commission was updated on the activities conducted under the Global Initiative<sup>3</sup> (GI) for the Control of African swine fever (ASF), noting that the GI is managed by the FAO and WOAHP under the GF-TADs. The responsibility for chairing the GF-TADs ASF Working Group alternates annually between FAO and WOAHP, with WOAHP holding this position for the current year (July 2022 to June 2023).

The Commission was informed that a key activity in the upcoming period is the development of guidelines for the manufacturing and development of safe and effective ASF vaccines, which is being led by a consultant engaged under a Cooperative Agreement between the United States Department of Agriculture Research Service (USDA-ARS) and WOAHP. The guidelines will be presented to the Biological Standards Commission to support the development of standards in the ASF chapter of the *WOAHP Terrestrial Manual*. The Commission was also informed of the work under the same Cooperative Agreement to establish a genomic platform for the exchange of information on circulating strains of ASFV, and other activities being undertaken at the global level, such as the development of a methodology for PVS Evaluation with ASF-specific content missions being led by WOAHP, and the provision of guidelines on controlling ASF in endemic settings, which is being led by FAO.

At the regional level, the Commission noted that regional Standing Groups of Experts (SGE) continue to be organised in Europe, the Americas and the Africa region, and a regional expert meeting on ASF in Asia and the Pacific was organised by WOAHP in March 2022. The Commission was also informed that the WOAHP Regional Representation for the Americas continues to support the organisation of capacity-building activities for the region, and recently facilitated joint interlaboratory comparisons for ASF and CSF between national laboratories and the WOAHP CSF Reference Laboratories and ASF European Union Reference Laboratory.

## **9. WOAHP Collaborating Centres**

None at this meeting.

## **10. Liaison with Other Commissions and Departments**

### **10.1. Terrestrial Animal Health Standards Commission (Code Commission)**

The Commission was updated on relevant ongoing activities of the Code Commission.

#### **10.1.1. Framework for *WOAHP Terrestrial Code* standards: disease-specific chapter**

Code Commission requested the Commission's opinion on the disease-specific *WOAHP Terrestrial Code* chapter template that was prepared by Code Commission Secretariat after Code Commission's February 2021 meeting. The objective of the template is to serve as a reference for those revising or developing a new chapter.

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<sup>3</sup> <http://www.gf-tads.org/asf/asf/en/>; accessed 24 September 2022

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The Commission commended the template, and provided comments to the Code Commission on the proposed sections for 'General Provisions' and 'Recommendations on surveillance'.

#### **10.1.2. Proposal for new Biosecurity Chapter**

Following the adoption of the new *Aquatic Code* Chapter 4.1. – Biosecurity for aquaculture establishments in May 2021, the Commission was asked (in conjunction with Code Commission) to consider the need, objective(s) and scope for a proposed new *WOAH Terrestrial Code* chapter on biosecurity (please refer to the February 2022 Code Commission report). The Commission agreed with the need for a chapter, and acknowledged the challenge of defining its scope. The Commission noted that several areas of the *WOAH Terrestrial Code* currently address biosecurity, and that this should be taken into consideration during the development of the chapter.

The Commission considered that the chapter should describe the overarching principles of biosecurity with an objective to support veterinary authorities in enforcement of regulations, and recommended that this be in the context of zoning and compartmentalisation. The Commission considered that the target audience for the chapter should mostly be the Veterinary Authority, and that the chapter should accommodate their needs for developing, verifying, enforcing and/or certifying their own national biosecurity programs and assessing performance as appropriate to their situation. In addition, the chapter should clearly outline the role of the Veterinary Authority in enforcing biosecurity. The Commission further agreed that it would be important for the Glossary definition of 'biosecurity' to be assessed to ensure it is defined consistently in the context of the *Terrestrial Code*. Any disease specific biosecurity requirement should be included in the relevant chapters.

The Commission noted that many guidance documents for biosecurity are available, particularly for specific diseases or production sectors, and cautioned against providing recommendations for implementing biosecurity at the farm level, as what is applicable in one country might not be relevant in another.

#### **10.1.3. Revisions of *WOAH Terrestrial Code* Chapters 8.10, 12.4 and 12.11**

The Commission reviewed and discussed a paper prepared by the Secretariat presenting the different elements supporting these requests, such as the impact on trade for the movement of horses from infected countries, the discrepancies observed between the chapters of the *WOAH Terrestrial Code* and *WOAH Terrestrial Manual*, as well as the opinion of the International Horse Sports Confederation (IHSC) and previous discussions of the September 2015 meeting of the Commission.

The Commission acknowledged that Chapter 8.10. 'Japanese encephalitis' was first adopted in 1992, and the most recent update was adopted in 2000, but the corresponding *WOAH Terrestrial Manual* Chapter 3.1.10. was updated in 2021. The Commission agreed that the current Chapter 8.10. was obsolete and, considering the latest evolution of the *WOAH Terrestrial Manual* Chapter, the current content was no longer relevant.

The Commission also noted that the need for revisions of Chapter 12.4. 'Equine encephalitis (Eastern and Western)' (no update since its first adoption in 1968), and Chapter 12.11. 'Venezuelan equine encephalomyelitis' (most recent update adopted in 1998). Considering the epidemiological similarities across these diseases, the Commission agreed to approach these diseases together, to ensure a consistent logic was applied across them.

While acknowledging that a full revision of these chapters will be needed to update their content and structure, the Commission requested the Secretariat to first undertake, in consultation with subject-matter experts, a thorough scientific assessment of the different susceptible animals, their epidemiological role, and their relevance for surveillance and disease prevention and control purposes, in order to further discuss the approach for the different chapters and, based on that, agree on the next steps and priorities. In this regard, the Commission suggested assessing these encephalitides against the criteria of Chapter 1.2. 'Criteria for the inclusion of diseases, infections and infestations in the OIE list' of the *Terrestrial Code*, prior to the starting the full revision of these chapters.

### **10.2. Biological Standards Commission**

The Commission and the Biological Standards Commission both have responsibilities in the ongoing work on development of case definitions, and in the assessment of pathogenic agents against the criteria for listing in Chapter 1.2. of the *Terrestrial Code*. At this meeting, the Commission considered two proposed case definitions and Biological Standards Commission's opinion on these (see Items 12.3.2.1 and 12.3.2.2), and one listing assessment with Biological Standard Commission's opinion on whether criterion 3 had been met (see item 12.2.4.1). A joint meeting

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of this Commission and the Biological Standards Commission was held by videoconference to discuss the case definition items.

## **11. Conferences, workshops, meetings, missions**

None at this meeting.

## **12. Disease control: specific issues**

### **12.1. Emerging diseases**

#### **12.1.1. Emerging diseases Standard Operating Procedure update**

The Commission was advised that, based on feedback received at the February 2022 Specialist Commission meetings (including the meeting of the bureaus of this Commission and Code Commission), the *Standard Operating Procedure For Determining Whether A Disease Should Be Considered As Emerging* (ED SOP) was amended<sup>4</sup> to ensure that it provides better guidance on the process for notification, and clarifies the involvement of Delegates in the process. Further clarification on the actions to continue monitoring of the existing ED towards listing assessment were included.

The Commission commended the work done on this important document that is intended to guide internal WOAHP processes, and suggested inclusion of a flowchart diagram to aid understanding of the steps involved.

#### **12.1.2. Consideration of stable events that previously were submitted to WAHIS as emerging disease events**

The Commission was advised of events for three diseases (infection with *Ehrlichia canis*, pigeon rotavirus, infection with porcine epidemic diarrhoea virus) reported as emerging to WOAHP prior to initial implementation of the ED-SOP in March 2021. The Commission was requested to consider the information provided for these 'legacy' disease events and confirm that it is appropriate for these stable disease events to be marked as 'closed' in WAHIS, or to advise of any requirement to assess any of the diseases against the WOAHP definition of emerging disease.

For both infection with *Ehrlichia canis* and pigeon rotavirus, the Commission agreed that these stable disease events should be marked as closed, and that (based on the available epidemiological information), there is no indication to conduct an assessment against the WOAHP definition of emerging disease. The same agreement was reached for infection with porcine epidemic diarrhoea virus as assessed by the Commission against the listing criteria of Chapter 1.2. in February 2019 and considered not to meet the criteria (so was not added to the list). In consequence, the Commission agreed that the associated stable disease events should be marked as closed.

#### **12.1.3. Annual reassessment of emerging diseases (SOP 5.1)**

##### **12.1.3.1. Infection with SARS-CoV-2**

The Commission noted that, in February 2022, the assessment of infection with SARS-CoV-2 against the listing criteria of Chapter 1.2. of the *WOAHP Terrestrial Code* was requested. The WOAHP Director General responded that the request would be taken into consideration following the established procedures. Consequently, in accordance with item 5.1 of the ED SOP, the Commission was asked to decide if, based on new evidence, the disease should be assessed against the list criteria of *WOAHP Terrestrial Code* Chapter 1.2., or (if not) confirm that the disease should be maintained as emerging for the purpose of notification to WOAHP.

The Commission acknowledged the importance of monitoring infection with SARS-CoV-2 in animals as the situation is still evolving. The Commission is of the opinion that the current knowledge, including the role of susceptible animals in the epidemiology of the disease, is insufficient to support conducting a listing assessment at this time, and noted that assessment against criterion 2 ('At least one country has demonstrated freedom or impending freedom from the disease, infection or infestation in populations of susceptible animals, based on the provisions of Chapter 1.4.') would

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<sup>4</sup> <https://www.woah.org/en/document/woah-standard-operating-procedure-for-determining-if-a-disease-should-be-considered-as-an-emerging-disease/>; accessed 24 September 2022



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pose a particular challenge. Therefore, the Commission advised that it should remain an emerging disease of animals, and will be reassessed according to Item 5.1 of the ED SOP in September 2023.

## 12.2. Evaluation of pathogenic agent against listing criteria of *WOAH Terrestrial Code* Chapter 1.2.

### 12.2.1. Consideration of the listing criteria in Chapter 1.2.

At its February 2022 meeting, the Commission expressed the need to prioritise revision of *WOAH Terrestrial Code* Chapter 1.2. (Criteria for the inclusion of diseases, infections and infestations in the OIE list) due to multiple difficulties in interpreting and applying the criteria experienced by those conducting the assessments (the Commission, *ad hoc* Groups, and subject-matter experts). Noting that at the 89th General Session of the World Assembly of Delegates (May 2022), some Members raised concerns that revising the criteria in Chapter 1.2., could affected the status of all listed diseases, the Commission discussed the criteria and the problems identified, to determine whether these could be addressed in the short term by means other than amending Chapter 1.2.

**Criterion 1 ('international spread of the pathogenic agent (via live animals or their products, vectors, or fomites) has been proven')**: the Commission considered that it would be difficult to identify pathogenic agents that would not have the potential to meet this criterion. However, they observed that it could be challenging to prove that this criterion has been met for non-listed pathogenic agents that are rarely typed to the level required for notification to WOA, as this detailed information may not be available. Further, they noted that all pathogenic agents assessed since 2017 as not having met the criteria for listing had been assessed as [YES] for this criterion, making questionable its utility for distinguishing between those agents that do, and those that do not, meet the criteria for listing.

Consequently, the Commission recommended that the *Standing Operating Procedure for Listing Decisions for Pathogenic Agents of Terrestrial Animals*<sup>5</sup> (Listing SOP) be adjusted to require that a preliminary assessment of this criterion is conducted internally by the Secretariat prior to presenting a request for listing to the Deputy Director General (currently, Listing SOP Item 2-1), to improve the overall efficiency of the process.

**Criterion 2 ('at least one country has demonstrated freedom or impending freedom from the disease')**: the Commission considered that it will almost always be possible to find a single country for which this criterion could be met, such as countries outside the vector range of a vector-borne disease. On the other hand, it also noted that it could be difficult to provide evidence of freedom for pathogenic agents if they were not included in a country's national control programme, and that surveillance methods using techniques other than targeted structured surveillance to demonstrate freedom may not be well accepted by Members.

Noting that the objective of the chapter as stated in Article 1.2.1. is to support Members by providing information needed to take appropriate action to prevent the transboundary spread of important animal diseases, the Commission considered it would be relevant to know whether Members regard the pathogenic agent as important, as demonstrated by actions managed or supervised by the Veterinary Authority to prevent either the entry or transboundary spread of the disease. The Commission proposed that the *Guidance for the application of criteria for listing terrestrial animal diseases*<sup>6</sup> (Guidance Document) be amended to include for this criterion consideration of whether there are countries that have implemented an official control programme for disease control, or prevent its transboundary spread.

**Criterion 3 ('reliable means of detection and diagnosis exist, a precise case definition is available to clearly identify cases and allow them to be distinguished from other diseases, infections or infestations')**: the Commission acknowledged that having a reliable means of detection and diagnosis does not necessarily imply that the test would be practical for the purposes of international trade or to support official control programmes, and gave the example of tests for the isolation of agents where results could take weeks. The Commission considered that in addition to being reliable, the means of detection and diagnosis ought to be accurate, cost-effective, and appropriate to the needs of disease control and safe trade. They noted that the Guidance Document currently indicates that (amongst other things) experts should consider suitability for different purposes, but that the examples provided for suitability were limited ('healthy versus clinically affected'). Referring again to the objective of the chapter provided in Article 1.2.1, the Commission proposed that the Guidance Document be amended to indicate that a test needs to be suitable for the purpose of

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<sup>5</sup> [https://www.woah.org/en/document/sop\\_fordelisting\\_pathogens\\_for\\_terrestrial\\_animals\\_oct2020/](https://www.woah.org/en/document/sop_fordelisting_pathogens_for_terrestrial_animals_oct2020/); accessed 25 September 2022

<sup>6</sup> <https://www.woah.org/en/document/guidance-for-the-application-of-criteria-for-listing-terrestrial-animal-diseases/>; accessed 25 September 2022

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preventing transboundary spread of the animal disease (noting that this would include by international trade of animals or animal products).

**Criterion 4a ('Natural transmission to humans has been proven, and human infection is associated with severe consequences')**: the Commission noted that the interpretation of the term 'severe' was inconsistent between experts. Nevertheless, the Commission considered the Guidance Document appropriately directs the experts to assess the public health impact at the population, not only individual, level. To assist experts' understanding, that Commission proposed that the Guidance Document for this criterion be amended to add reference to World Health Organisation definitions for Risk Groups 3 and 4 in addition to the existing reference to WHO-DALYs.

**Criterion 4b ('the disease has been shown to have a significant impact on the health of domestic animals at the level of a country or a zone taking into account the occurrence and severity of the clinical signs, including direct production losses and mortality')**: the Commission noted that expert assessments did not always consider the impact of the disease at the level of the country or zone, and proposed that this be mentioned in the guidance.

**Criterion 4c ('the disease has been shown to, or scientific evidence indicates that it would, have a significant impact on the health of wildlife taking into account the occurrence and severity of the clinical signs, including direct economic losses and mortality, and any threat to the viability of a wildlife population')**: while the Commission acknowledged the importance of criterion 4c, it requested the Secretariat to consult with the Wildlife Working Group to determine if there are listed diseases, infections or infestations that satisfy only the third component (c) of criterion 4 and not 4(a) and 4(b). If so, a future revision of Chapter 1.2. could consider grouping together the second and third elements of criterion 4.

**Overall comments**: the Commission recommended that experts be reminded to study and refer to the Guidance Document during their assessments. They proposed additional changes to the guidance document, including clarifying that the references provided by experts to substantiate their opinions should be up to date. Further, in cases where an expert finds it difficult to conclusively answer either [YES] or [NO] to a criterion, the Commission recommended that experts be requested to describe the problem, noting whether it resulted from insufficient information regarding the pathogen or the disease, or from difficulty in interpreting or applying the criterion. The Commission recommended inclusion of a flowchart in the Listing SOP to improve understanding of the process.

The Commission considered that the proposed amendments to the Listing SOP and the Guidance Document would result in more efficient use of resources, and improve experts' interpretation of the listing criteria. In consequence, no specific revisions to Chapter 1.2. are recommended at this time. Nevertheless, the Commission would welcome the opportunity to be involved in the discussion when Chapter 1.2. is next opened for revision.

The Commission's opinion was forwarded to Code Commission for their consideration.

#### **12.2.2. Consideration of the categorisation used in WOAH Terrestrial Code Chapter 1.3**

In its work in reviewing and endorsing case definitions developed by subject-matter experts for diseases for which a case definition does not yet exist in the *Terrestrial Code*, the Commission noted the opinion of Code Commission that a conflict with WOAH standards occurs when the animal host/s proposed for the case definition do not match the category under which the disease (or infection or infestation) is listed in Chapter 1.3. The Commission was advised that, because of these concerns, the endorsed case definition for Nipah virus encephalitis which included a broader range of species than swine was removed from the WOAH website and is thus not available to assist Members in meeting their notification obligations for this disease.

The Commission queried the utility of the existing species categorisation in Chapter 1.3., and understood that this categorisation might have been introduced as an administrative convenience, further noting that these categories do not completely align with the names used for the sections in Volume II of the *Terrestrial Code*. Taking the example of bovine viral diarrhoea, the revised animal hosts defined as cattle and water buffaloes would be consistent with '*bovidae*' (Section 11) in Volume II of the *Terrestrial Code*, but inconsistent with a strict interpretation of 'cattle' as used in Article 1.3.2. Within separate disease-specific chapters, the Commission also noted that the notification obligations may cover species extending beyond the single primary species category under which the disease is listed under in Chapter 1.3. Examples from section 11 '*Bovidae*' include infection with *Mycoplasma mycoides* subsp. *mycoides* SC (contagious bovine pleuropneumonia) (Chapter 11.5.), haemorrhagic septicaemia (Chapter 11.7.), infection with lumpy skin



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disease virus (Chapter 11.9.), and the current version of Chapter 11.10. (Infection with *Theileria annulata*, *T. orientalis* and *T. parva*) adopted in May 2022.

While the Commission acknowledged that the existing species categorisation in Chapter 1.3. could provide useful guidance regarding primary species of concern for diseases (or infections or infestations) without case definitions, it did not consider the existing categorisation to be science based. Accordingly, the Commission considered that the existing species categorisation within Chapter 1.3. should not constrain the scope of animal hosts in case definitions that have been developed based on scientific evidence. Given the importance of providing clear case definitions to assist Members in the timely and consistent notification of disease events, the Commission invited the Code Commission to consider their opinion that the species categorisation of Chapter 1.3. should not constrain the scope of animal hosts in science-based case definitions. Further, the Commission recommended that the consistency between the species categories in Chapter 1.3. and the section names in Volume II be improved.

The Commission's opinion was forwarded to Code Commission for their consideration.

### **12.2.3. Consideration of requests and determination of way forward (SOP 3.1-2)**

#### **12.2.3.1. *Theileria mutans***

The revised disease-specific Chapter 11.10. 'Infection with *Theileria annulata*, *T. orientalis* and *T. parva*' was adopted in May 2022. In response to a Member comment requesting that *T. mutans* be included in the scope of the revised chapter, Code Commission noted in their September 2021 report that this species could not be added until it has been assessed against the listing criteria of *WOAH Terrestrial Code* Chapter 1.2. As the Deputy Director General agreed that the assessment of this pathogenic agent against the listing criteria should proceed, the Commission considered the request and conducted the assessment.

The Commission concluded that *T. mutans* did not meet the criteria of Chapter 1.2., and recommended against adding infection with *T. mutans* to the list of notifiable diseases. Their assessment was forwarded to Code Commission, and annexed as [Annex 3](#).

#### **12.2.3.2. Atypical bovine spongiform encephalopathy**

In September 2022, the Code Commission requested that atypical bovine spongiform encephalopathy (aBSE) be evaluated against the listing criteria of Chapter 1.2. of the *Terrestrial Code*. As the Deputy Director General agreed during the meeting that the assessment should proceed, the Commission considered the request and conducted the assessment concluding that aBSE did not meet the criteria of Chapter 1.2.

The opinion of the Commission and their assessment was forwarded to Code Commission; the assessment is annexed as [Annex 4](#).

### **12.2.4. Consideration of expert consultation report and BSC opinion (SOP 3.2-8)**

#### **12.2.4.1. Strangles (infection with *Streptococcus equi* subsp. *equi*)**

The Commission reviewed the assessments by subject-matter experts of strangles (infection with *Streptococcus equi* subsp. *equi*) and the consideration by Biological Standards Commission made at their February 2022 meeting that this pathogenic agent meets criterion 3 of Chapter 1.2. of the *Terrestrial Code*.

The Commission agrees with the experts that international spread of the pathogenic agent has been proven, and that criterion 1 has been met. The Commission agreed that at least one country (Iceland) has demonstrated freedom, and noted the existence of control schemes operating in at least one sector (*i.e.* high health, high performance horses). The Commission agreed with the experts that criterion 2 had been met, and further agreed with the experts and Biological Standards Commission that criterion 3 is met, as reliable means of detection and diagnosis exist, and cases can be distinguished from other diseases. However, the Commission disagreed with the experts' assessments of criterion 4 (b), which the experts assessed as being met. The Commission acknowledged the importance of this disease at farm and sector level, but noted that the experts' assessments focused on the impact of strangles within a specific equine sector, and did not provide

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evidence of the significance of the impact on the health of animals at the country or zone level. Critically, although the disease is acknowledged to be significant within the equine industry, there was no indication of national or zonal control among Members, apart from one Member which is historically free and maintains this through strict control. The Commission considers none of the elements of criterion 4 to be met.

The Commission concluded that, as none of the elements of criterion 4 were met, infection with *Streptococcus equi* subsp. *equi* does not meet the criteria for inclusion in the list of notifiable diseases. This conclusion and the experts' summary assessment were forwarded to the Code Commission, and the experts' summary assessment annexed to this report ([Annex 5](#)).

## **12.3. Development of case definitions**

### **12.3.1. Case definition process and progress update**

The Commission thanked the Secretariat for the update. They commended the detailed description provided of the internal processes for ensuring that case definitions published on the WOAH website do not conflict with existing standards and requested that a flowchart be developed to enhance understanding of the steps involved. The Commission noted the efforts made to incorporate feedback received in the development of new case definitions, and to improve documentation in the reports of rationale and justification for those elements excluded from, as well as those incorporated in, case definitions.

### **12.3.2. Case definitions**

#### **12.3.2.1. Infection with avian metapneumovirus (turkey rhinotracheitis)**

The Commission reviewed the draft case definition for infection with avian metapneumovirus (turkey rhinotracheitis) prepared by the expert group, along with the accompanying technical report and the opinion of the Biological Standards Commission on the case definition. Both Commissions met for a discussion on the case definition, and this report summarises their combined position. The Commissions (here, Biological Standards Commission and the Scientific Commission) commended the work of the experts.

The Commissions proposed that, when a disease-specific chapter for this condition is drafted, consideration be given to naming the chapter 'infection with avian metapneumovirus (turkey rhinotracheitis and swollen head syndrome of chickens) as the same pathogenic agent causes both diseases. They noted that a corresponding update would be required in Chapter 1.3. of the *Terrestrial Code*. The experts recommended, and the Commissions agreed, that the animal host is defined as 'poultry' following the definition in the *WOAH Terrestrial Code* Glossary as this includes game birds as well as turkeys and chickens, and is aligned with similar definitions for several other avian diseases.

The Commissions noted that the experts recommended four options, any one of which is sufficient for confirming a case of infection with avian metapneumovirus for the purposes of notification to WOAH. For Option 1 involving isolation of the agent, the Commissions replaced 'isolated and characterised', with 'isolated and identified' as the term 'characterised' may be interpreted by Members as requiring more efforts than those needed to confirm that the organism is as stated. The Commissions revised the second option proposed by the experts to separate the components for antigen and nucleic acid detection (thus resulting in five instead of the expert-proposed four options for confirmation of a case), and recommended revisions to both components. The Commissions indicated that when nucleic acid specific to avian metapneumovirus is detected, its identity must be confirmed, noting that the methods for doing so include but are not limited to molecular sequencing. For the option referring to the detection of antigen, the Commissions recommended that additional evidence supporting this finding should be added to the option. The Commissions considered that clinical signs and pathologic lesions, even if non-specific for this disease, together with a positive laboratory test would be sufficient to confirm a case of infection with avian metapneumovirus, and added this element to the options for antigen detection (now Option 3) and antibody detection (now Option 5). For both options, they removed the third element 'there is cause to suspect that the animal host has previously been associated with or had contact with avian metapneumovirus' as they felt it unlikely to be relevant and considered there may be circumstances where this could lead to inappropriate declaration of a confirmed case which may have unintended consequences.

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The revised case definition was endorsed by the Commission. As no conflict was identified between the endorsed case definition and either the *WOAH Terrestrial Code* or *WOAH Terrestrial Manual*, the endorsed case definition was forwarded to the Code Commission and will be made available on the WOA website in due course. The experts' report is provided as [Annex 6](#).

#### **12.3.2.2. Infection with pathogenic rabbit lagoviruses (rabbit haemorrhagic disease)**

The Commission reviewed the draft case definition for infection with pathogenic lagoviruses (rabbit haemorrhagic disease) prepared by an expert group, along with the accompanying technical report and the opinion of the Biological Standards Commission on the case definition. Both Commissions met for a joint discussion on the case definition, and this report summarises their combined position. The Commissions (here, Biological Standards Commission and the Scientific Commission) commended the work of the experts.

The Commissions recommended that references to 'rabbit haemorrhagic disease' in the *WOAH Terrestrial Code* be updated to 'infection with pathogenic lagoviruses' for consistency with the current WOA convention for listing terrestrial animal diseases, and to reflect the expanding host range of the pathogenic agent.

The Commissions also agreed with leporids (specifically *Oryctolagus cuniculus*, and *Lepus* and *Sylvilagus* species) as the animal host species, and the two distinct phylogenetic groups of the pathogenic lagoviruses (RHDV which includes RHDVa, and RHDV2) identified for the purposes of notification to WOA. The Commissions further agreed that European brown hare syndrome virus should not be included in the scope of the case definition for rabbit haemorrhagic fever as it is not a WOA-listed disease.

The Commissions noted that the experts recommended only one option as suitable for confirmation of a case (detection of either antigen or nucleic acid specific to pathogenic lagoviruses, provided it is accompanied by additional supporting evidence), and had not recommended options for virus isolation (there are no *in vitro* (cell culture) methods for isolation of virus), evidence of active infection detected by seroconversion (several reasons including short incubation period and high mortality), or detection of antibodies in conjunction with supporting evidence (would be used only rarely, and because of the high mortality and short incubation period).

The Commissions agreed with the experts regarding the reasons to not include virus isolation as an option. This Commissions also agreed that it would be inappropriate to include an option based on seroconversion alone, emphasising that the existence and worldwide diffusion of non-pathogenic but antigenically related lagoviruses as the main reason for this. However, noting that mortality varies after infection with pathogenic rabbit lagoviruses and depends on the virus and the age of the rabbit, the Commissions disagreed with the experts and recommended inclusion of the option for detection of antibodies to pathogenic rabbit lagovirus in conjunction with supporting evidence (thus creating an Option 2). The Commissions agreed that the supporting evidence should consist of two elements (either the presence of clinical signs or pathological lesions, or the presence of an epidemiological link to a suspected or confirmed case). The Commissions further noted that the entry in *WOAH Terrestrial Manual* Chapter 3.7.2. 'Rabbit haemorrhagic disease' Table 1 'Test methods available for the diagnosis of rabbit haemorrhagic disease and their purpose' regarding the use of the isotype ELISA for the purpose 'Confirmation of clinical cases' (currently '++') is being changed to '+' (= suitable in very limited circumstances).

The Commission endorsed the revised case definition.

The Commission identified no conflict between the endorsed case definition and the *WOAH Terrestrial Manual*, but noted that despite host species not being mentioned in Article 13.2.1 of the disease-specific chapter on rabbit haemorrhagic disease in the *Terrestrial Code*, there is a possible conflict between the case definition proposed by the experts and the *WOAH Terrestrial Code* by omission (i.e. hares and *Sylvilagus* spp.) under Article 13.2.2. 'RHD free country'. The Commission recommended that the provisions of Chapter 13.2. be amended to reflect the expanded host range of the case definition.

Due to the potential for conflict between the endorsed case definition and the *Terrestrial Code*, the endorsed case definition was forwarded to the Code Commission to inform their revisions of, and for incorporation into, Chapter 13.2. of the *Terrestrial Code*, and will not be made available to Members on the WOA website. However, the experts' report is annexed to this report as [Annex 7](#).

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#### 12.4. Recommendations from WOAAH Scientific and Technical Review on insects

Dr Megan Quinlan, coordinator for the 41st edition of the WOAAH *Scientific and Technical Review* updated the Commission on key findings of the Review which was commissioned to explore the state of play of live insect trade, discuss experiences with shipments, and the risks and gaps associated with this trade. The objective of the Review was to encourage discussion on the role of international bodies and various stakeholders to address concerns and improve conditions for trade in live insects.

One of the key challenges identified by Dr Quinlan was the absence of an overarching framework for the international trade in insects, with diverse requirements between different international, regional, and national technical or regulatory bodies based on their respective mandates. Sanitary certificates may at times be requested for insect consignments, without corresponding assessments on risks to animal health, or attestations of the production and handling processes undergone by the insects. Dr Quinlan stressed that inconsistency in requirements and lack of guidance have at times hampered shipments that present negligible risks (for example, seed colonies representing sterile, non-vectored species that have been subject to robust quality control systems for research purposes).

The Commission thanked Dr Quinlan for her extensive work on the Review and for highlighting potential actions that may be taken by WOAAH under its remit to improve the conditions for insect trade. The Commission noted the growing importance of this subject given the increasing volume of insects being traded, especially as food and feed, and agreed that the risks to animal health should be examined, in particular those associated with the movement of arthropod species capable of vectoring animal diseases.

The Commission considered the existing coverage and reference to insects in the *Terrestrial Code*, which (with the exception of bees) are present in the contexts of vector-borne disease management, and feed and food safety. The Commission requested that this subject be discussed in further detail with the Code Commission at the next joint meeting of the bureaux in February 2023.

The Commission also acknowledged the various international bodies that could play a role in insect trade, and encouraged WOAAH to engage relevant organisations such as the International Plant Protection Convention (IPPC) and Codex to facilitate consistency in international regulations and guidance on insect trade. The Commission was also informed of an upcoming annual event organised by the International Platform of Insects for Food and Feed, a non-profit organisation that represents the interests of insect producers at European level, and supported the participation of WOAAH representatives at this event to understand the growth of the insect sector and contributions as a complementary source of protein to address regional and global food challenges.

#### 12.5. Capturing genotype information in WAHIS

The Commission was reminded that WOAAH Members report disease information through WAHIS in accordance with Chapters 1.1. of the *Terrestrial* and *Aquatic Animal Health Codes*, through immediate notifications, follow-up reports and six-monthly reports. For many of the listed diseases in WAHIS, an optional field called 'serotype/subtype/genotype' can be activated to assist those Members who choose to report this information to do so in a standardised way. The World Animal Health Information and Analysis Department (WAHIAD) considered that activating this field would support Members' control efforts for some diseases, while for others, WAHIAD anticipated little benefit would result from field activation. WAHIAD requested SCAD's opinion on the diseases for which activation of the field would, or would not, provide benefit to Members.

The Commission commented that, in general, recording such information (when available, and if a Member chooses to do so) would be useful for Members in informing their knowledge of the epidemiology of the diseases, and in development of their risk assessments. In particular, the Commission recommended that the field be activated for those listed zoonotic diseases with severe public health impact, including *Mycobacterium tuberculosis* complex. The Commission also noted that in the particular case of lumpy skin disease (LSD), it is possible to distinguish the LSD virus from other pox virus and the need to differentiate different virus strains using nucleic acid methods, so field activation would support Members' disease control activities.

#### 12.6. Antiparasitic drug resistance

The Commission was updated on the activities of the WOAAH Electronic Expert Group on Antiparasitic Resistance (EEG-APR), and advised that the EEG-APR completed its mandate in December 2021 with the publication of the document 'Responsible and prudent use of anthelmintic chemicals to help control anthelmintic resistance in grazing livestock species'. The Commission was advised that this publication was presented during the last Antimicrobial Resistance Working Group meeting held from 27 to 29 April 2022. The Antimicrobial Resistance Working Group commended the work of the EEG-APR, and asked that the EEG-APR continues to explore independently the next steps to be undertaken in anthelmintics and other parasites outside of WOAAH's definition of antimicrobial agents.

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The Commission reviewed the publication and agreed that the work of the EEG-APR should continue. However, they considered that it may be too soon to begin development of standards and that guidelines may be more appropriate at this stage. They agreed that it would be useful to expand the scope of the work to include ectoparasites.

The opinion of the Commission was forwarded to the Antimicrobial Resistance Working Group and Code Commission for consideration.

### **12.7. Monkeypox**

Since early May 2022, increasing numbers of cases of human infection with monkeypox virus have been reported from both endemic and non-endemic countries to the World Health Organization (WHO). On 23 July 2022 WHO decided that the multi-country outbreak of monkeypox represents a public health emergency of international concern (PHEIC). Declaration of a PHEIC constitutes the highest level of global public health alert under the International Health Regulations, and can enhance coordination, cooperation and global solidarity.

WOAH is monitoring the situation closely because the heightened prevalence in humans may increase the risk of transmission to animals, and affect the epidemiology of the disease. WOA has developed a 'Questions and Answers on Monkeypox and Animals' page on its website and provides links to other resources. In addition, the Commission was consulted twice (in late May and again in August) to consider whether infection with monkeypox virus would meet WOA's definition of an emerging disease (of animals) if it were identified in animals other than those known to be reservoirs for infection in endemic countries. The August consultation (updated at this meeting) took into consideration reports of transmission of monkeypox from humans to individual dogs. To date, the Commission considers that infection with monkeypox virus should not be considered by WOA as an emerging disease (of animals). Currently, the outbreak is maintained by human-to-human transmission, and there is no evidence that infection with monkeypox virus impacts the health of domestic animals at the level of a country or zone, or has an impact on the health of wildlife. Increased morbidity and spread to new geographical areas have been observed only in humans.

### **12.8. Avian influenza (H3N8)**

In late May 2022 the Commission discussed whether infection with avian influenza (H3N8) should be notified to WOA as an emerging disease (of animals) or according to Article 10.4.1. should it be detected in poultry or in domestic or captive wild birds, respectively. At the time of the assessment (concluded in early June 2022), and noting that two cases of infection with influenza A (H3N8) had been detected in humans but not in animals, the Commission's opinion was that infection with avian influenza (H3N8) should not be considered by WOA as an emerging disease (of animals). They noted no change in the epidemiology of the infection in birds, although this subtype has traditionally been associated with birds, horses and dogs. In addition, despite reports of infections in humans, there have been no detections in animal species, nor has human-to-human transmission been detected. Further, a preliminary FAO/OIE/WHO Joint Rapid Risk Assessment for human infection with influenza A (H3N8), China (published on 18 May 2022) concluded that while further human infections with influenza A (H3N8) viruses cannot be excluded, the risk is low. The likelihood of sustained human-to-human transmission is also low based on the limited information obtained to date.

### **12.9. Considerations on the vaccination of wild animals of high conservation value**

The Commission welcomed the opportunity to provide feedback on a revised document prepared by the Wildlife Working Group (WWG) on considerations on the vaccination of wild animals of high conservation value, first discussed in their September 2019 meeting.

The Commission commended the updated document but expressed concern about extending the scope of the document to wild animals, defined as including 'captive wild (zoo) animals and free-living wild animals'. The Commission proposed that the scope be restricted to 'captive wild (zoo) animals and endangered species of free-living wild animals' (for example, Przewalski's horses, or Saiga antelopes threatened by an emerging disease). The Commission's main concern is to ensure that vaccination of wild animals does not affect the disease status of the relevant compartment, zone, or country, and recommended that any vaccine used be non-replicating and that it be possible to differentiate vaccinated from infected animals.



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## 13. For Commission information

### 13.1. Updates on standing items

#### 13.1.1. OFFLU

The Commission was briefed on the activities of OFFLU<sup>7</sup>, the Joint WOA-FAO Network of Expertise on Animal Influenza and their contribution to the WHO Consultation on the Composition of Influenza Virus Vaccines on avian influenza and swine influenza for the period September 2021 to February 2022. Data on 939 H5, H7 and H9 avian influenza genetic sequences were contributed by animal health laboratories from Africa, the Americas, Asia, Europe and Oceania. 397 H1 and H3 global swine influenza virus sequences were also analysed and submitted. Antigenic characterisations undertaken by OFFLU contributing laboratories provided information for updating WHO's recommendations for development of new candidate vaccine viruses for pandemic preparedness.

In response to the avian influenza epidemic with continued high numbers of detections in poultry and wild birds, OFFLU experts shared epidemiological and molecular data on currently circulating viruses and released situation updates and statements needed to inform surveillance and control policies. Swine influenza experts shared data on the global swine influenza situation in pig populations by providing regional and country-specific reports from Asia, Europe and Americas. Equine influenza experts participated in the WOA-FAO expert surveillance panel on equine influenza vaccine composition to update the vaccine recommendations for the equine industry in 2022. The OFFLU annual report 2021 is published on the website.

#### 13.1.2. STAR-IDAZ International Research Consortium

The Commission was updated on the activities of the Secretariat of STAR-IDAZ International Research Consortium of Animal Health (SIRCAH)<sup>8</sup>, currently co-hosted from WOA-FAO. The current SIRCAH is supported by a five-year EU-funded project that will come to an end in September 2022. The proposal for further funding for the next 4.5 years was successful under the European Commission Horizon Europe 2022 programme. WOA-FAO, CABI, Defra, Kreavet and UKRI-BBSRC will be partners in SIRCAH2 'Support for the International Research Consortium on Animal Health', which is anticipated to begin in October 2022.

The next phase of funding will enable the STAR-IDAZ IRC to build on its current programme and further engage the private sector, which is important in ensuring the delivery of animal health solutions, including vaccines, diagnostics, drugs, and other control strategies. There will also be more emphasis on strengthening the regional networks, which have been successfully revitalized during the pandemic with virtual meetings.

WOA-FAO will be leading the work package (WP) on international engagement and advocacy with the aim to maintain and enlarge the network. In addition, WOA-FAO will keep contributing to the others' WPs for operational support to the STAR-IDAZ network, research prioritisation and programme alignment, communication and dissemination.

In addition, the Commission was informed about the meeting of the STAR-IDAZ IRC Executive Committee of the 1st of March and of the Scientific Committee held in June 2022 to discuss the activities of the Working Groups (WGs) on the current priorities: ATA, ASF, emerging diseases, influenza, veterinary vaccinology, One Health, bovine tuberculosis, and helminths. During the meeting, members were updated on new initiatives and projects, including the European Partnership for Animal Health and Welfare, and the ICRAD third call.

Five regional virtual meetings took place during the last six months (Africa and Middle East (AMERN), the Americas, Asia and Australasia, and the European Collaborative Working Group for Animal Health and Welfare (CWG AHW)). During the meetings, regional members were updated on the status and activities of the Networks, common research priorities for the Regions were discussed and agreed, opportunities for sharing resources, including access to samples and strains of organisms, specialised facilities and expertise were explored as well as international funding opportunity.

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<sup>7</sup> <https://www.offlu.org/>; accessed 28 September 2022

<sup>8</sup> <https://www.star-idaz.net/>; accessed 28 September 2022

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In the last six months STAR-IDAZ IRC published the 2022 *African Swine Fever Virus Research Review*<sup>9</sup> in collaboration with USDA and Global ASF Research Alliance (GARA), and the *Global veterinary vaccinology research and innovation landscape survey report*<sup>10</sup>.

### **13.1.3. WOAHA antimicrobial resistance activities for information**

#### **13.1.3.1. Chapter 6.10 Responsible and prudent use of antimicrobial agents in veterinary medicine**

The Commission was updated on the broadened scope of Chapter 6.10. to include additional text concerning antimicrobial use in non-food producing (companion and leisure) animals and the inclusion of a new article related to non-food producing animals (Article 6.10.9. 'Responsibilities of animal owners'). The revised chapter further expands the text to include the One Health concept, and elaborates the role of the Competent Authority in the design, implementation and evaluation of a multisectoral National Action Plans and in reporting antimicrobial use data to WOAHA's global database (ANIMUSE). Responsibilities of relevant stakeholders are now aligned with the Codex Code of Practice where appropriate. The revised chapter and rationale for the proposed changes were discussed and endorsed by the AMR Working Group during their August 2022 meeting, and were considered by Code Commission during their September 2022 meeting.

#### **13.1.3.2. Technical Reference Document of Antimicrobials of Veterinary Importance for Swine**

The Commission was updated on the AMR Working Group's efforts since the development of the document. After an issue was raised by a swine expert from the World Veterinary Association, the Working Group recommended that WOAHA seek feedback from external experts on swine health concerning the inclusion of *Chlamydia suis* given its geographical importance and availability of licensed veterinary medicinal products for its treatment. Publication of the technical document was not approved by the Working Group until further revision related to chlamydiosis was completed. The technical document will be resubmitted to the Working Group for review at its October 2022 meeting.

### **13.1.4. Global Burden of Animal Diseases programme (GBADS) and the WOAHA Collaborating Centre for the Economics of Animal Health**

SCAD noted that the GBADS programme continues to develop and refine methodologies to assess the economic burden of animal diseases in a systematic manner to include net loss of production, expenditure, and trade impacts. Since the last update, focus has been on (i) enhancing the programme's theory of change, (ii) advancing work on the creation of estimates, (iii) engaging in the initial phases of external validation of the GBADS methods, (iv) expanding the programme's analytical platform, and (v) progressing on country case study activities. In the coming months, the programme will be working to complete delivery of the current phase of the programme.

Particularly, regarding the development of the Animal Health Loss Envelope (AHLE), targeted case studies are being used to provide initial burden estimates and to identify priority areas for future method development and data acquisition. To date, the AHLE methodology has been applied to calculate estimates for the major share of intensive chicken and pig meat production (70 to 80% of the global production) and derive estimates for Ethiopia focusing on small ruminants and cattle. It is also recognised that greater clarity is needed in communicating the concept outside of the GBADS programme. This is being refined through a discussion paper, which is now in its second redraft prior to submission, and through the creation and trialling of the AHLE dashboards.

A model for animal disease burden attribution has been created with various levels of attribution. At the highest level are infectious causes, non-infectious causes, and external factors. The AHLE can be attributed further looking at disease-specific issues and if necessary, disease variations such as the severity or different serotypes. To date the AHLE has been estimated at the highest level for small ruminants in Ethiopia. A systematic review of cause-specific impacts is ongoing.

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<sup>9</sup> [https://www.star-idaz.net/app/uploads/2022/03/ASFV-Report\\_draft\\_final\\_31-march-2022.pdf](https://www.star-idaz.net/app/uploads/2022/03/ASFV-Report_draft_final_31-march-2022.pdf), accessed 26 September 2022

<sup>10</sup> [https://www.star-idaz.net/app/uploads/2022/06/Star-Idaz-Veterinary-Vaccinology-report\\_Jan-2022.pdf](https://www.star-idaz.net/app/uploads/2022/06/Star-Idaz-Veterinary-Vaccinology-report_Jan-2022.pdf), accessed 26 September 2022

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The WOA Collaborative Centres for the Economics of Animal Health (CCEAH) in Europe is promoting the systematic use of and training on the methods for economics in animal health for the benefit of WOA Members. To date, it has delivered on four key outputs. These outputs include (i) the establishment of two case studies in the Netherlands and Norway; (ii) the development of a biomass estimation guide; and (iii) an assessment of potential synergies with DISCONTTOOLS (a provider of information on 53 infectious diseases), and engagement with the private agricultural sector. Work continues to develop the necessary strategic alliance to implement analyses for the estimation of the AHLE in the established case studies. Further, activities have begun to establish a CCEAH for the Americas. A five-year workplan is being created and an application for the establishment of the centre will be submitted in the coming months to align with possible endorsement at the 2023 General Session.

#### **13.1.5. WOA Observatory**

The Commission received an update on activities during the first year of the Implementation phase of the Observatory. In December, WOA will publish the first annual report on the implementation of WOA standards. Following the approach progressively developed via the prototypes, the Observatory has used WOA data along with some external data to describe Members' implementation of WOA Standards. Limitations of these data and its impact on conclusions is acknowledged but has still allowed for identification of very relevant findings and recommendations.

The general objective of the Observatory, state of play, and first findings of the annual report were presented to the Commission. Much of the data was not available in a format that allows assessment, covered different scopes, and inconsistent purposes for reporting (voluntary versus compulsory). A need to collect more specific information was identified as well as a need to evaluate the current data we collect such as the WAHIS annual report. A lack of data directly assessing the implementation of standards and discrepancies between WAHIS reporting and Standards was also identified, suggesting the need for a better connection between WAHIS reporting and the Standards.

The Commission was also updated on the results of a survey of Focal Points on Aquatic Animals conducted in early 2022 to identify barriers to the implementation of standards and transparency in disease reporting. Half of responding Members were very confident that they notified aquatic animal diseases to WOA in a timely and comprehensive way. Two thirds of responding Members considered that they have trade regulations equivalent to WOA Standards. Barriers included lack of human resources and workforce capacity, impact of notification on trade, lack of priority given by government agencies to aquatic animal health, and lack of knowledge on notification obligation or procedures.

#### **13.1.6. WOA research coordination activities**

SCAD was informed that an action plan for WOA research coordination activities was developed in June 2022. The aim of the plan is to identify and disseminate research needs of importance for WOA and engage with research communities and funders in a coordinated manner. This will facilitate the production of impactful research findings that can support WOA activities including standard setting and global strategies.

The plan is in accordance with WOA's Seventh Strategic Plan covering the period from 2021 to 2025 and which includes 'leveraging relevant scientific expertise to address multisectoral animal health and welfare issues' as one of its five strategic objectives. Currently WOA promotes and coordinates collaboration to develop international animal health policy and works with leading research institutes, scientific consortiums, and technical resource partners as well as its network of Reference Laboratories and Collaborating Centres to obtain the best available science to support its Members' decision-making processes. WOA is committed to scientific excellence, and thus is uniquely placed to identify and prioritise areas where scientific knowledge requires further development ('knowledge gaps'). This activity will complement and enhance the current research coordination activities on major infectious diseases of livestock of STAR-IDAZ IRC.

The Commission welcomed WOA's research coordination activities, as these could bring additional knowledge to support scientific evidence for standard setting. The Commission noted that it would be important to apply criteria to the identified research needs to prioritise those research needs that could generate impactful knowledge. The Commission acknowledged the importance of this activity as a basis of the science system, and for identifying research gaps that, when filled, would support WOA's standard-setting activities.



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## **14. Programme and priorities**

### **14.1. Update and prioritisation of the work programme**

The Commission updated its work programme, identified the priorities, and scheduled the dates for the various *ad hoc* Group meetings, which will be accessible to Members through the WOAAH website.

The updated work programme is attached as [Annex 8](#).

## **15. Adoption of the meeting report**

The Commission adopted the report that was circulated electronically after the meeting.

## **16. Date of the next meeting**

The next meeting of the Commission is scheduled to take place between 13 and 17 February 2023 with a possible extension of three days of virtual meetings (21 to 23 February 2023).

## **17. Meeting Review**

A meeting review was conducted in accordance with the Commission Performance Management Framework.

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.../Annexes

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## **Annex 1.**

### **Adopted Agenda**

#### **MEETING OF THE WOAHP SCIENTIFIC COMMISSION FOR ANIMAL DISEASES**

**Paris, 19 to 23 September 2022**

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- 1. Welcome**
- 2. Meeting with the Director General**
- 3. Adoption of the agenda**
- 4. Feedback from the 89th General Session**
- 5. Terrestrial Animal Health Code**
  - 5.1. Member comments received for Commission consideration
    - 5.1.1. Chapter 8.14 – Infection with rabies virus
    - 5.1.2. Chapter 11.4. Bovine spongiform encephalopathy
  - 5.2. Other considerations
    - 5.2.1. Chapter 4.7.7. Containment zone
    - 5.2.2. Mycobacterium tuberculosis complex
- 6. Ad hoc and Working Groups**
  - 6.1. Meeting reports for endorsement
    - 6.1.1. *Ad hoc* Group on the revision of BSE standards and the maintenance of official BSE risk status: 22-24 June 2022
  - 6.2. Planned *ad hoc* Groups and confirmation of proposed agendas
    - 6.2.1. *Ad hoc* Group on the evaluation of AHS status: 28–30 September 2022 (cancelled)
    - 6.2.2. *Ad hoc* Group on the evaluation of BSE risk status: 4–6 October 2022 (cancelled)
    - 6.2.3. *Ad hoc* Group on the evaluation of PPR status: 19–21 October 2022
    - 6.2.4. *Ad hoc* Group on the evaluation of FMD status: 2–4, 7 and 9 November 2022
    - 6.2.5. *Ad hoc* Group on the evaluation of the endorsement of dog-mediated rabies control programmes: 8–10 November 2022
    - 6.2.6. *Ad hoc* Group on the evaluation of CBPP status: 16 November 2022
    - 6.2.7. *Ad hoc* Group on the evaluation of CSF status: 5–7 December 2022 (to be confirmed)
    - 6.2.8. *Ad hoc* Group on the review of BSE surveillance guidelines: 25 October 2022
  - 6.3. Meeting reports for information
- 7. Official animal health status**
  - 7.1. Annual reconfirmations for maintenance of status
    - 7.1.1. Selection of status for comprehensive review of 2022 annual reconfirmations
    - 7.1.2. Strategy for the assessment of increasing annual reconfirmations
  - 7.2. Specific update on official animal health status
    - 7.2.1. Update on situation of countries/zone with suspended or reinstated disease status
  - 7.3. State of play and prioritisation of expert mission to Members requested by the Commission

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- 7.3.1. Follow-up of past missions/virtual interviews
  - 7.3.2. State of play and prioritisation
  - 7.4. Standards and procedures related to official status recognition
    - 7.4.1. Questionnaire and procedure for recovery of free status, or risk assessment, in case of recurrence of rinderpest
    - 7.4.2. Follow-up on the impact assessment related to the revised BSE standards and list of countries already having an official risk status by WOA
    - 7.4.3. Development of the Official Status Management Platform
  - 8. Global control and eradication strategies**
    - 8.1. Peste des Petits Ruminants. Global Control and Eradication Strategy
    - 8.2. African swine fever. Global control initiative
  - 9. WOA Collaborating Centres**
  - 10. Liaison with Other Commissions and Departments**
    - 10.1. Terrestrial Animal Health Standards Commission (Code Commission)
      - 10.1.1. Framework for *Terrestrial Code* standards: disease-specific chapter
      - 10.1.2. Proposal for new Biosecurity Chapter
      - 10.1.3. Revisions of *Terrestrial Code* Chapters 8.10, 12.4 and 12.11
    - 10.2. Biological Standards Commission
  - 11. Conferences, workshops, meetings, missions**
  - 12. Disease control: specific issues**
    - 12.1. Emerging diseases
      - 12.1.1. Emerging diseases Standard Operating Procedure update
      - 12.1.2. Consideration of stable events that previously were submitted to WAHIS as emerging disease events
      - 12.1.3. Annual reassessment of emerging diseases (SOP 5.1)
    - 12.2. Evaluation of pathogenic agent against listing criteria of *Terrestrial Code* Chapter 1.2.
      - 12.2.1. Consideration of the listing criteria in Chapter 1.2.
      - 12.2.2. Consideration of the categorisation used in *Terrestrial Code* Chapter 1.3
      - 12.2.3. Consideration of requests and determination of way forward (SOP 3.1-2)
      - 12.2.4. Consideration of expert consultation report and BSC opinion (SOP 3.2-8)
    - 12.3. Development of case definitions
      - 12.3.1. Case definition process and progress update
      - 12.3.2. Case definitions
    - 12.4. Recommendations from WOA Scientific and Technical Review on insects
    - 12.5. Capturing genotype information in WAHIS
    - 12.6. Antiparasitic drug resistance
    - 12.7. Monkeypox
    - 12.8. Avian influenza (H3N8)
    - 12.9. Considerations on the vaccination of wild animals of high conservation value
  - 13. For Commission information**
    - 13.1. Updates on standing items
      - 13.1.1. OFFLU
      - 13.1.2. STAR-IDAZ International Research Consortium

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13.1.3.WOAH antimicrobial resistance activities for information

13.1.4.Global Burden of Animal Diseases programme (GBADS) and the WOAH Collaborating Centre for the Economics of Animal Health

13.1.5.WOAH Observatory

13.1.6.WOAH research coordination activities

**14. Programme and priorities**

14.1.Update and prioritisation of the work programme

**15. Adoption of the meeting report**

**16. Date of the next meeting**

**17. Meeting Review**

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## Annex 2.

### List of Participants

#### MEETING OF THE WOAHP SCIENTIFIC COMMISSION FOR ANIMAL DISEASES

Paris, 19 to 23 September 2022

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##### MEMBERS OF THE COMMISSION

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**Dr Cristóbal Zepeda**  
(President)  
Area Director South America Pacific  
and Central America  
USDA APHIS  
UNITED STATES OF AMERICA

**Dr Trevor Drew**  
(Vice-President)  
CSIRO Australian Centre for  
Disease Preparedness  
AUSTRALIA

**Dr Misheck Mulumba**  
(member)  
Agricultural Research Council  
SOUTH AFRICA

**Dr Kris De Clercq**  
(Vice-President)  
Department of Infectious Diseases in  
Animals  
Exotic and Vector-borne Diseases  
Sciensano  
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**Dr Silvia Bellini**  
(member)  
Istituto Zooprofilattico  
Sperimentale della Lombardia e  
dell'Emilia Romagna "Bruno  
Ubertini"  
ITALY

**Dr Baptiste Dungu**  
(member)  
Veterinary Specialist  
Afrivet Business Management  
SOUTH AFRICA

##### WOAH HEADQUARTERS

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**Dr Gregorio Torres**  
Head  
Science Department

**Dr Roberta Morales**  
Scientific Coordinator  
Science Department

**Dr Min Kyung Park**  
Head  
Status Department

**Dr Jenny Hutchison**  
Deputy Head  
Science Department

**Dr Valeria Mariano**  
Research Coordinator  
SIRCAH STAR-IDAZ  
Science Department

**Dr Anna-Maria Baka**  
Chargée de mission  
Status Department

**Dr Rachel Tidman**  
Global Rabies Coordinator  
Science Department

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## Annex 3.

### 12.2.3.1 LISTING ASSESSMENT FOR *THEILERIA MUTANS*

#### MEETING OF THE WOAHP SCIENTIFIC COMMISSION FOR ANIMAL DISEASES

Paris, 19 to 23 September 2022

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This assessment was conducted by the Scientific Commission for Animal Diseases during their September 2022 meeting.

#### 1. Summary

Criterion	Outcome
<b>Criterion 1:</b> International spread of the pathogenic agent (via live animals or their products, vectors or fomites) has been proven.	YES
<b>Criterion 2:</b> At least one country has demonstrated freedom or impending freedom from the disease, infection or infestation in populations of susceptible animals, based on the provisions of Chapter 1.4.	NO
<b>Criterion 3:</b> Reliable means of detection and diagnosis exist, and a precise case definition is available to clearly identify cases and allow them to be distinguished from other diseases, infections or infestations.	YES
<b>Criterion 4a:</b> Natural transmission to humans has been proven, and human infection is associated with severe consequences.	NO
<b>Criterion 4b:</b> The disease has been shown to have a significant impact on the health of domestic animals at the level of a country or a zone taking into account the occurrence and severity of the clinical signs, including direct production losses and mortality.	NO
<b>Criterion 4c:</b> The disease has been shown to, or scientific evidence indicates that it would, have a significant impact on the health of wildlife taking into account the occurrence and severity of the clinical signs, including direct economic losses and mortality, and any threat to the viability of a wildlife population.	NO
<b>CONCLUSION:</b> Does infection with <i>Theileria mutans</i> match the listing criteria that are described in the Terrestrial Animal Health Code Chapter 1.2?	NO

#### 2. Scientific rationale

##### 2.1. Criterion 1: International spread of the pathogenic agent (via live animals or their products, vectors or fomites) has been proven

*Theileria mutans* is present in eastern, western and southern African countries throughout the range of its tick vectors [1]. Historically, there are a very few reports of its identification in countries outside of Africa (for example, England [2,3], USA [4], Australia [5], India [6], Guadeloupe [7]) but these may well be in error as subsequent publications with confirmation using modern diagnostic techniques have not appeared. For example, although it appears likely that international movement of animals in the 18th century was responsible for the importation of *Theileria* spp. from West Africa to the Caribbean islands, the report of *T. mutans* in Guadeloupe [7] was likely due to serological cross reaction with a closely related species [8].

**Assessment:** [YES] (in Africa)

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**2.2. Criterion 2: At least one country has demonstrated freedom or impending freedom from the disease, infection or infestation in populations of susceptible animals, based on the provisions of Chapter 1.4**

Given the limited global distribution of infection with *Theileria mutans*, there is potential for many countries to demonstrate freedom or impending freedom from this infection.

The Commission notes that the disease is considered of such negligible importance so most countries have not prioritised efforts to demonstrate freedom.

**Assessment:** [NO]

**2.3. Criterion 3: Reliable means of detection and diagnosis exist, and a precise case definition is available to clearly identify cases and allow them to be distinguished from other diseases, infections or infestations**

The *WOAH Terrestrial Manual* chapter for theileriosis [9] makes reference to *Theileria mutans* and mentions a serological test (indirect enzyme-linked immunosorbent assay for *T. parva* and *T. mutans*) that is based on recombinant parasite-specific antigens, noting also that the schizonts of *T. mutans* are distinct from *T. parva* under microscopic examination. In addition, an early (1989) molecular methods (DNA probes) specific for *T. mutans* is referenced.

The Commission remarked that 'diagnosis' involves making the association between the pathogen and the presence of the pathogen. They noted that *T. mutans* may frequently be present as a co-infection with other more pathogenic *Theileria* species but may not be contributing to the disease.

**Assessment:** [YES]

**2.4. Criterion 4a: Natural transmission to humans has been proven, and human infection is associated with severe consequences**

No evidence identified.

**Assessment:** [NO]

**2.5. Criterion 4b: The disease has been shown to have a significant impact on the health of domestic animals at the level of a country or a zone taking into account the occurrence and severity of the clinical signs, including direct production losses and mortality**

*Theileria mutans* is commonly described as causing no disease, or only mild disease [9]. However, one source, although noting that 'its [*T. mutans*] only practical significance in southern Africa is the confusion that it causes in the differential diagnosis of *T. parva*' does state that 'in eastern Africa, pathogenic strains of the parasite occur, which may cause severe clinical illness and death' [1]. Nevertheless, no relevant information was identified concerning the occurrence and severity of the clinical signs, including direct production losses and mortality.

**Assessment:** [NO]

**2.6. Criterion 4c: The disease has been shown to, or scientific evidence indicates that it would, have a significant impact on the health of wildlife taking into account the occurrence and severity of the clinical signs, including direct economic losses and mortality, and any threat to the viability of a wildlife population**

*Theileria mutans* infects African buffalo, usually asymptotically [10].

**Assessment:** [NO]

**2.7. Conclusion**

This assessment indicates that *T. mutans* does not meet the criteria of Chapter 1.2 and so should not be added to the list of notifiable diseases in Chapter 1.3 of the *Terrestrial Code*.

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## Annex 4.

### 12.2.3.2 Listing assessment for atypical bovine spongiform encephalopathy

#### MEETING OF THE WOAHP SCIENTIFIC COMMISSION FOR ANIMAL DISEASES

Paris, 19 to 23 September 2022

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This assessment for atypical bovine spongiform encephalopathy (aBSE) was conducted by the Scientific Commission for Animal Diseases during their September 2022 meeting.

#### 1. Summary

Criterion	Outcome
<b>Criterion 1:</b> International spread of the pathogenic agent (via live animals or their products, vectors or fomites) has been proven.	NO
<b>Criterion 2:</b> At least one country has demonstrated freedom or impending freedom from the disease, infection or infestation in populations of susceptible animals, based on the provisions of Chapter 1.4.	NO
<b>Criterion 3:</b> Reliable means of detection and diagnosis exist, and a precise case definition is available to clearly identify cases and allow them to be distinguished from other diseases, infections or infestations.	YES
<b>Criterion 4a:</b> Natural transmission to humans has been proven, and human infection is associated with severe consequences.	NO
<b>Criterion 4b:</b> The disease has been shown to have a significant impact on the health of domestic animals at the level of a country or a zone taking into account the occurrence and severity of the clinical signs, including direct production losses and mortality.	NO
<b>Criterion 4c:</b> The disease has been shown to, or scientific evidence indicates that it would, have a significant impact on the health of wildlife taking into account the occurrence and severity of the clinical signs, including direct economic losses and mortality, and any threat to the viability of a wildlife population.	NO
<b>CONCLUSION:</b> Does atypical bovine spongiform encephalopathy match the listing criteria that are described in the Terrestrial Animal Health Code Chapter 1.2?	NO

#### 2. Scientific rationale

##### 2.1. Criterion 1: International spread of the pathogenic agent (via live animals or their products, vectors or fomites) has been proven

There is evidence of aBSE oral transmission to a single animal under extremely high dose of exposure and a lengthy incubation period [1]. However, there is no proven case of natural transmission of aBSE among animals, nor is there any evidence of international spread.

**Assessment:** [NO]

##### 2.2. Criterion 2: At least one country has demonstrated freedom or impending freedom from the disease, infection or infestation in populations of susceptible animals, based on the provisions of Chapter 1.4

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This is a disease that is spontaneously manifested, so it is impossible for any Member to confirm freedom from this pathogen. Whilst there are countries that have not reported detection of a case of aBSE, there is no known means by which a country can be assured that a spontaneous case of aBSE will not occur in the future. Therefore, due to the characteristics of this disease, this criterion is considered not to be met.

**Assessment:** [NO]

**2.3. Criterion 3: Reliable means of detection and diagnosis exist, and a precise case definition is available to clearly identify cases and allow them to be distinguished from other diseases, infections or infestations**

Reliable means of detection and diagnosis exist, and it is possible to clearly identify cases and distinguish them from other diseases, in particular cBSE.

**Assessment:** [YES]

**2.4. Criterion 4a: Natural transmission to humans has been proven, and human infection is associated with severe consequences**

There has been no case of aBSE reported in a human. However, given the similarity of aBSE to cBSE and the effectiveness of the measures currently adopted for cBSE, the Commission emphasised the importance of all Members continuing to apply these measures to prevent the potential recycling of infectious materials, and monitoring for the occurrence of aBSE.

**Assessment:** [NO]

**2.5. Criterion 4b: The disease has been shown to have a significant impact on the health of domestic animals at the level of a country or a zone taking into account the occurrence and severity of the clinical signs, including direct production losses and mortality**

This disease manifests spontaneously. It occurs very rarely and does not have a significant impact on the health of domestic animals at the level of a country or a zone.

**Assessment:** [NO]

**2.6. Criterion 4c: The disease has been shown to, or scientific evidence indicates that it would, have a significant impact on the health of wildlife taking into account the occurrence and severity of the clinical signs, including direct economic losses and mortality, and any threat to the viability of a wildlife population**

The Commission could find no evidence that natural infection of wildlife with aBSE has occurred.

**Assessment:** [NO]

**2.7. Conclusion**

The Commission concluded that atypical bovine spongiform encephalopathy does not meet the listing criteria of Chapter 1.2 of the *Terrestrial Code*.

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## Annex 5.

### 12.2.4.1 Listing assessment for Strangles (*Streptococcus equi* subsp. *equi*)

#### SUMMARY OF THE EXPERT ASSESSMENT OF INFECTION WITH *STREPTOCOCCUS EQUI* (STRANGLES) AGAINST THE LISTING CRITERIA OF WOAHP TERRESTRIAL CODE CHAPTER 1.2. (JANUARY 2022)

#### MEETING OF THE WOAHP SCIENTIFIC COMMISSION FOR ANIMAL DISEASES

Paris, 19 to 23 September 2022

Three experts participated in this consultation:

- **Prof. Ashley Boyle** (University of Pennsylvania, United States of America)
- **Dr Richard Newton** (British Horseracing Association, United Kingdom)
- **Prof. Seongho Ryu** (Jeju Halla University, Republic of Korea).

#### 1. Summary

Criterion	1	2	3
<b>Criterion 1:</b> International spread of the pathogenic agent (via live animals or their products, vectors or fomites) has been proven.	YES	YES	YES
<b>Criterion 2:</b> At least one country has demonstrated freedom or impending freedom from the disease, infection or infestation in populations of susceptible animals, based on the provisions of Chapter 1.4.	YES	YES	YES
<b>Criterion 3:</b> Reliable means of detection and diagnosis exist, and a precise case definition is available to clearly identify cases and allow them to be distinguished from other diseases, infections or infestations.	YES	YES	YES
<b>Criterion 4a:</b> Natural transmission to humans has been proven, and human infection is associated with severe consequences.	NO	NO	YES
<b>Criterion 4b:</b> The disease has been shown to have a significant impact on the health of domestic animals at the level of a country or a zone taking into account the occurrence and severity of the clinical signs, including direct production losses and mortality.	YES	YES	YES
<b>Criterion 4c:</b> The disease has been shown to, or scientific evidence indicates that it would, have a significant impact on the health of wildlife taking into account the occurrence and severity of the clinical signs, including direct economic losses and mortality, and any threat to the viability of a wildlife population.	NO	NO	NO
<b>CONCLUSION:</b> Does infection with <i>Streptococcus equi</i> match the listing criteria that are described in the Terrestrial Animal Health Code Chapter 1.2?	YES	YES	YES

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## 2. Scientific rationale

### 2.1. Criterion 1: International spread of the pathogenic agent (via live animals or their products, vectors or fomites) has been proven

A recent genome sequencing project investigating genetic relationships among 670 *Streptococcus equi* isolates recovered from 19 different countries confirmed national and international transmission events maintaining endemic strangles in horse populations throughout the world [1]. The high-resolution sequencing included examples of genomically identical isolates recovered from different geographically diverse locations but which were definitively linked by international movement of horses. This provides very strong scientific evidence of the international spread of strangles.

### 2.2. Criterion 2: At least one country has demonstrated freedom or impending freedom from the disease, infection or infestation in populations of susceptible animals, based on the provisions of Chapter 1.4

Iceland's equine population is free from *S. equi* subsp. *equi* [2,3].

Iceland's equine population was established by introduction of animals by settlers in the 9<sup>th</sup> and 10<sup>th</sup> century, and has been geographically isolated since that time as subsequent imports were banned.

### 2.3. Criterion 3: Reliable means of detection and diagnosis exist, and a precise case definition is available to clearly identify cases and allow them to be distinguished from other diseases, infections or infestations

A precise case definition is available of both acute and carrier states. Acute disease is characterized by pyrexia, mucopurulent nasal discharge, and abscessation of the lymph nodes of the head and neck [4,5].

The etiological agent for strangles is *Streptococcus equi* subsp. *equi* and can be differentiated from other bacteria (in particular *Streptococcus equi* subsp. *zooepidemicus*) via culture techniques [6] or PCR assays [7,8]. Carrier status is defined by a positive culture or PCR obtained from the nasopharynx or guttural pouch six weeks or longer after the acute infection [9]. Rapid, sensitive and specific molecular detection methods recently have been reviewed [10].

### 2.4. Criterion 4a: Natural transmission to humans has been proven, and human infection is associated with severe consequences

*Streptococcus equi* subsp. *equi* is an invasive pathogen with a very restricted host range. However, one expert noted the potential zoonotic role of *Streptococcus equi* subsp. *equi* [11–14]. Infections of humans with this pathogen appear to occur very rarely (usually in immunocompromised persons) after close contact with horses, and may be associated with bacteremia, sepsis, and meningitis.

### 2.5. Criterion 4b: The disease has been shown to have a significant impact on the health of domestic animals at the level of a country or a zone taking into account the occurrence and severity of the clinical signs, including direct production losses and mortality

Infection with *S. equi* subsp. *equi* is classically characterised by acute pyrexia followed by pharyngitis and associated inappetence and subsequent abscess formation in the submandibular and retropharyngeal lymph nodes, often followed by marked purulent nasal discharge; coughing and ocular discharge may also be noted (reviewed as a consensus by Boyle et al. [15]). The disease can occur in horses of any age and fatality rates have been reported at 1 to 10%, and rates of morbidity are far higher. Strangles causes profound disruption and economic losses to the equine industry, and is one of the most challenging equine infectious diseases to manage (perspective with examples provided by Waller [16]). The disease is considered endemic in most countries where it occurs and affected premises may have long-standing recurring bouts of clinical disease, which carry considerable health and welfare consequences for affected horses.

### 2.6. Criterion 4c: The disease has been shown to, or scientific evidence indicates that it would, have a significant impact on the health of wildlife taking into account the occurrence and severity of the clinical signs, including direct economic losses and mortality, and any threat to the viability of a wildlife population

No evidence found to support this criterion.

## 2.7. Conclusion

The experts were unanimous in their opinion that infection with *Streptococcus equi* subsp. *equi* (*S. equi*, strangles) fulfilled the criteria for listing outlined in *WOAH Terrestrial Code* Chapter 1.2.

They noted that inclusion of this condition in the OIE list would help ensure that asymptomatic carriers are prevented from spreading the organism between countries, and that this will improve the health and welfare of equids around the world, as well as providing economic benefits for the equestrian community.

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## Annex 6.

### 12.3.2.1 Report of the Development of the Case Definition for Infection with Avian Metapneumovirus (Turkey Rhinotracheitis) 2 July 2021 to 21 January 2022

#### MEETING OF THE WOAHP SCIENTIFIC COMMISSION FOR ANIMAL DISEASES

Paris, 19 to 23 September 2022

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The objective of this report is to provide the rationale and scientific justification for elements of the case definition for infection with avian metapneumovirus (turkey rhinotracheitis), developed via videoconference and email exchanges between 2 July 2021 and 21 January 2022.

The purpose of the case definition is to support notification to the WOAHP as described in the *Terrestrial Animal Health Code* (the *Terrestrial Code*) Chapter 1.1.

Details of the experts and WOAHP staff who contributed to the drafting process are provided in [Appendix 1](#).

#### 1. Process

The Official 2021-1 provides a synopsis of this initiative: 'Developing case definitions for OIE-listed diseases for terrestrial animals'<sup>11</sup>.

This report including the draft case definition will be presented for consideration first to the Biological Standards Commission (BSC) and then to the Specialist Commission for Animal Diseases (SCAD) at their next meetings. After endorsement by SCAD, and provided there is no conflict with the *WOAHP Terrestrial Code*, the finalised case definition will be published on the WOAHP website and, following the standard-setting process, eventually will be included in the *Terrestrial Code*.

#### 2. Background

Turkey rhinotracheitis is listed in the *WOAHP Terrestrial Code* Chapter 1.3 'Diseases, infectious and infestations listed by the OIE' in Article 1.3.6 in the category of 'avian diseases and infections'. There is no corresponding disease-specific chapter in the *WOAHP Terrestrial Code*, but the current WOAHP Manual of Diagnostic Tests and Vaccines for Terrestrial Animals (the *WOAHP Terrestrial Manual*) contains Chapter 3.3.15 'Turkey rhinotracheitis'. An update to the *WOAHP Terrestrial Manual* chapter was amended by BSC in September 2021 and circulated to Members for first-round comments.

WOAHP WAHIS was consulted on 15 December 2021 for summary information<sup>12</sup> on 'turkey rhinotracheitis' developed from data contained in official reports (six-monthly reports, immediate notification and follow-up reports). Figure 1 summarises the total numbers of new outbreaks reported to the WOAHP between January 2006 and June 2021.

#### 3. Discussion

##### 3.1. Disease name

The experts expressed concern with use of the name 'turkey rhinotracheitis' as the disease affects a wide range of wild and domestic bird species in addition to turkeys. Noting that the title of the *WOAHP Terrestrial Manual* Chapter 3.3.15 (amended by BSC in September 2021) has been updated to 'Turkey rhinotracheitis (avian metapneumovirus infections)', the experts suggested that the OIE listing in the *WOAHP Terrestrial Code* for this condition be amended to follow the pattern of 'infection with [pathogenic agent]'.

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<sup>11</sup> [https://oiebulletin.fr/?officiel=10-3-2-2021-1\\_case-definitions](https://oiebulletin.fr/?officiel=10-3-2-2021-1_case-definitions)

<sup>12</sup> <https://wahis.oie.int/#/dashboards/qd-dashboard>

### 3.2. Pathogenic agent

The pathogenic agent for 'turkey rhinotracheitis' is avian metapneumovirus (aMPV), a single-stranded non-segmented negative-sense RNA virus belonging to the family *Pneumoviridae*, genus *Metapneumovirus* [1].

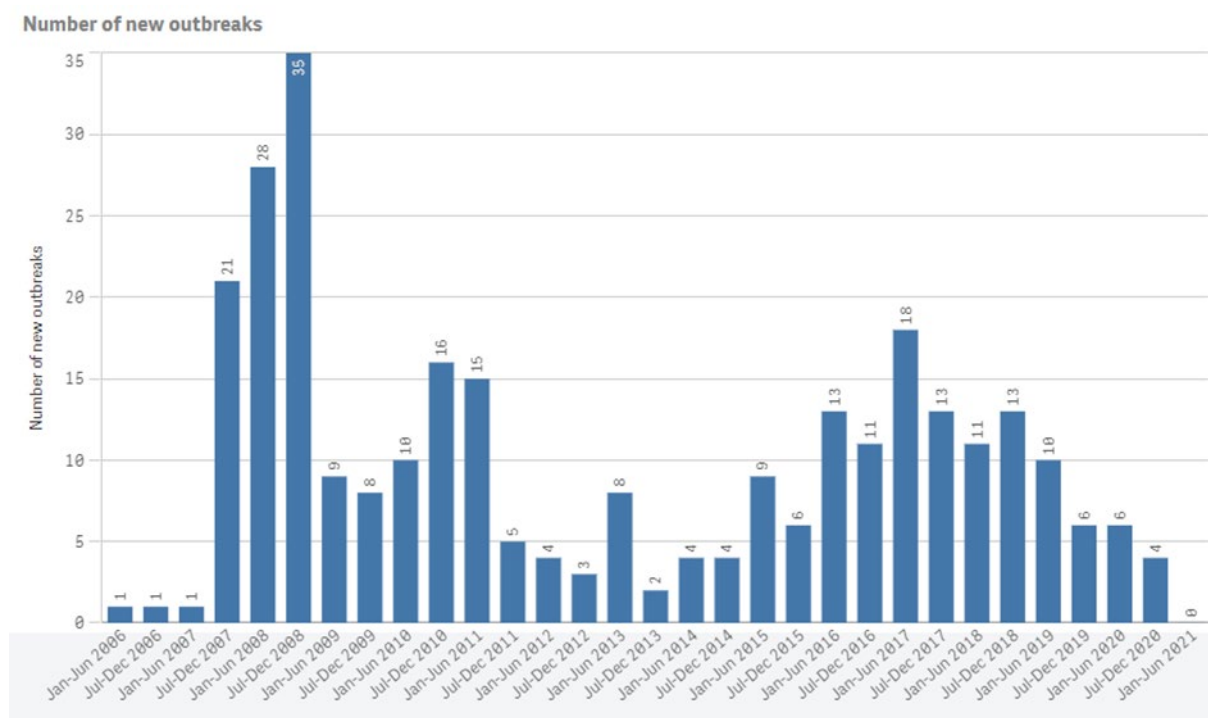


Figure 1 New outbreaks of 'turkey rhinotracheitis' notified to WAHIS by Members between January 2006 and June 2021.

### 3.3. Host

The experts noted that a wide range of wild and domestic bird species (including Galliformes and ducks) are susceptible to infection with aMPV [2]; however, for the purpose of notification to the WOA, they recommended that animal hosts for infection with aMPV be 'poultry', as defined in the *WOAH Terrestrial Code Glossary*.

### 3.4. Epidemiologic and diagnostic criteria

The experts identified four options (any one of which is sufficient) to confirm a case of infection with aMPV for the purposes of notification to the WOA (Appendix 1).

The clinical signs associated with infection with aMPV in susceptible animals are non-specific and diagnosis must be confirmed with laboratory testing [3]. Consequently, the experts did not include presence of clinical signs in any of the four options proposed for confirming a case for the purposes of notification.

#### 3.4.1. Option 1

The experts agreed that isolating and characterising aMPV in samples from poultry would be sufficient to confirm a case of infection with aMPV. They elected to omit 'excluding vaccine strains' from this option, noting that disease prevention may be achieved in poultry flocks using either inactivated or live vaccines, or a combination of both [3], and that reversion to virulence has been documented following use of live vaccines [4,5].



### 3.4.2. Option 2

The experts noted the many examples in the *WOAH Terrestrial Code* where confirmation of a case of 'infection with pathogenic agent' by detection of materials such as antigen or ribonucleic acid is supported by the requirement for additional information (e.g. epidemiologic link to a confirmed case, or suspicion of exposure to pathogenic agent). Examples include infection with foot and mouth disease virus (Chapter 8.8.)<sup>13</sup>, infection with African swine fever virus (Chapter 15.1.)<sup>14</sup>, infection with classical swine fever virus (Chapter 15.2.)<sup>15</sup>, infection with African horse sickness virus (Chapter 12.1)<sup>16</sup>.

In addition, the experts noted the need to consider the purpose of the case definition, which in this case is notification to the WOA for the purposes of managing the spread of important animal diseases and achieving better disease control. In this context, confirmation of a case can trigger requirements for risk mitigation actions, so requiring substantiating evidence of the presence of actual disease or infection is reasonable.

Nevertheless, the experts considered that the increasingly wide availability of newer technologies such as next-generation sequencing (NGS) may result in identification of pathogens without previous suspicion (i.e. epidemiological links or clinical signs). These technologies offer sufficient confidence in the identification of the agent by the laboratory testing alone, making redundant the need for supplemental evidence. Therefore, the experts did not consider it necessary to include additional options for supporting the confirmation of a case of infection with aMPV by detection of antigen or ribonucleic acid specific to aMPV that is not the consequence of vaccination. Noting that this development has broad application across many pathogenic agents, the experts invite the Specialist Commissions to consider the possibility of omitting the requirement for supporting evidence from case definition options that cover the detection of antigenic material or ribonucleic acid.

### 3.4.3. Option 3

The experts discussed the role of detection of antibodies that are not a consequence of vaccination in confirming a case of infection with aMPV, and identified two satisfactory options (3 and 4). The experts noted that an antibody response would be expected following vaccination, and agreed that results of testing that might be conducted to monitor a vaccination program should not inappropriately trigger a requirement for notification.

The experts used the term 'seroconversion' to indicate that option 3 requires sequential sampling to demonstrate an increase in serological titres over time from the same flock. The experts considered that this term should be included and explained in the Glossary of the *WOAH Terrestrial Manual*.

### 3.4.4. Option 4

Option 4 was developed to address the situation where sequential samples were not available, and describes two options for supporting evidence that (together with the results of the antibody testing) are sufficient for confirmation of a case.

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<sup>14</sup> [https://www.oie.int/en/what-we-do/standards/codes-and-manuals/terrestrial-code-online-access/index.php?id=169&L=1&htmlfile=chapitre\\_asf.htm](https://www.oie.int/en/what-we-do/standards/codes-and-manuals/terrestrial-code-online-access/index.php?id=169&L=1&htmlfile=chapitre_asf.htm)

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<sup>16</sup> [https://www.oie.int/en/what-we-do/standards/codes-and-manuals/terrestrial-code-online-access/index.php?id=169&L=1&htmlfile=chapitre\\_ahs.htm](https://www.oie.int/en/what-we-do/standards/codes-and-manuals/terrestrial-code-online-access/index.php?id=169&L=1&htmlfile=chapitre_ahs.htm)

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.../Appendix

**Report of the Development of the Case Definition for Infection with Avian Metapneumovirus  
(Turkey Rhinotracheitis)  
2 July 2021 to 21 January 2022**

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## Annex 7.

### 12.3.2.2 Report of the Development of the Case Definition for Infection with Pathogenic Rabbit Lagoviruses (Rabbit Haemorrhagic Disease) (9 March to 25 August 2022)

#### MEETING OF THE WOAHP SCIENTIFIC COMMISSION FOR ANIMAL DISEASES

Paris, 19 to 23 September 2022

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The objective of this report is to provide the rationale and scientific justification for elements of the case definition for infection with pathogenic rabbit lagoviruses (rabbit haemorrhagic disease) which was developed via videoconference and email exchange between 9 March and 25 August 2022.

The purpose of the case definition is to support notification to the WOAHP as described in the WOAHP *Terrestrial Animal Health Code* (the *Terrestrial Code*) Chapter 1.1.

Details of the external experts and WOAHP staff who contributed to the drafting process are provided in [Appendix 1](#).

#### 1. Process

The Official 2021-1 provides a synopsis of this initiative: 'Developing case definitions for OIE-listed diseases for terrestrial animals' [1].

This report and the draft case definition will be presented for consideration first to the Biological Standards Commission (BSC) and then to the Scientific Commission for Animal Diseases (SCAD) at their next meetings. After endorsement by SCAD, and provided there is no conflict with either the WOAHP *Terrestrial Code* or the WOAHP Manual of Diagnostic Tests and Vaccines for Terrestrial Animals (the *WOAHP Terrestrial Manual*), the finalised case definition will be published on the WOAHP website and, following the standard-setting process, eventually will be included in the *Terrestrial Code*.

#### 2. Background

Rabbit haemorrhagic disease is listed in the *WOAHP Terrestrial Code* Chapter 1.3 'Diseases, infections and infestations listed by the OIE' in Article 1.3.7. in the category of 'lagomorph diseases and infections'. While there is a corresponding disease-specific chapter in the *WOAHP Terrestrial Code* (Chapter 13.2 'Rabbit haemorrhagic disease', most recent update 2012), it does not include a case definition. The *WOAHP Terrestrial Manual* contains Chapter 3.7.2. 'Rabbit haemorrhagic disease' (version adopted 2021).

WOAHP-WAHIS was consulted on 29 April 2022 for summary information<sup>17</sup> on 'rabbit haemorrhagic disease' developed from data contained in official reports (six-monthly reports, immediate notification, and follow-up reports). Figure 1 summarises the total numbers of new outbreaks reported to the WOAHP between January 2005 and December 2021.

#### 3. Discussion

##### 3.1. Disease name

The experts recommended that references to 'rabbit haemorrhagic disease' in the WOAHP *Terrestrial Code* are updated to 'infection with pathogenic rabbit lagoviruses' as this is consistent with the current WOAHP convention for listing terrestrial animal diseases and better accommodates the recently expanded host range of the pathogenic agent.

##### 3.2. Pathogenic agent

The original or 'classic' pathogenic rabbit lagovirus (rabbit haemorrhagic disease virus, or RHDV) was identified in the 1980s in China. Since then, at least two distinct phylogenetic groups of pathogenic rabbit lagoviruses have been

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<sup>17</sup> <https://wahis.woah.org/#/dashboards/qd-dashboard>

recognised: 1) RHDV and 2) RHDV2 [4,5]. RHDV and RHDVa belong to the same serotype, and are collectively referred to as RHDV [6].

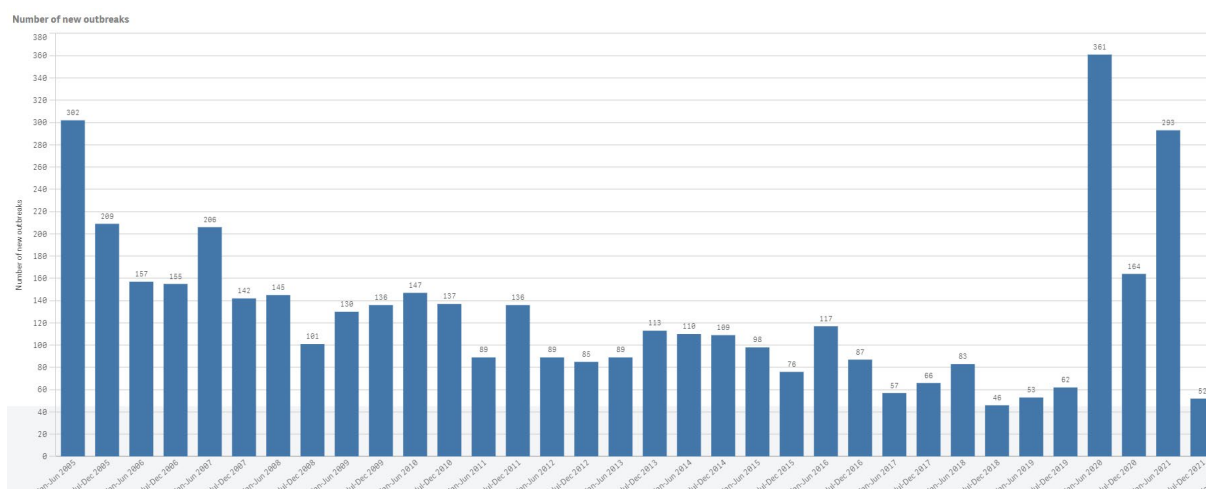


Figure 1 New outbreaks of 'rabbit haemorrhagic disease' notified to WOA-WAHIS by Members between January 2005 and December 2021.

A related pathogenic lagovirus (European brown hare syndrome virus) is associated with a similar clinical syndrome in European hares ('European brown hare syndrome'), but is not included in the scope of this case definition. Currently, European brown hare syndrome is not listed by WOA in the *Terrestrial Code* Chapter 1.3 but is considered a 'non-OIE listed disease affecting wildlife'.

### 3.3. Hosts

RHDV has only ever been isolated from domestic and wild rabbits (*Oryctolagus cuniculus*) [7]. However, RHDV2 which emerged around 2010 in rabbits in Europe [4] also causes disease in several *Lepus* (hare) [5,8–10] and *Sylvilagus* (including American cottontails) species [11,12]. Recently, RHDV2 has been isolated from the Eurasian badger (*Meles meles*) but there is currently no evidence that this species contributes to the epidemiology of the disease [13].

For purposes of notification to WOA, the host animals for infection with pathogenic rabbit lagoviruses are defined as leporids. This family includes three genera: rabbits, hares, and cottontail (*Sylvilagus*) species.

### 3.4. Epidemiologic and diagnostic criteria

The experts identified one option for confirming a case of infection with pathogenic rabbit lagoviruses for the purposes of notification to the WOA. However, another three options commonly incorporated in other WOA case definitions were not used by the experts for defining infection with pathogenic rabbit lagoviruses.

Virus isolation was not considered an option as there are no in vitro (cell culture) methods for isolation of virus. Although isolation of virus through inoculation of rabbits is possible, welfare concerns preclude using this technique for routine diagnosis.

Seroconversion alone was not included because, although serological tests are available [14,15], the experts felt that seroconversion with its requirement for repeat testing would be of little use in confirming a case of infection with pathogenic rabbit lagovirus, for reasons including: 1) the short incubation period of the disease and high mortality, 2) the ease of direct diagnosis performed with readily available techniques, 3) the limited possibility to distinguish vaccinated from infected rabbits, and 4) the existence and worldwide diffusion of non-pathogenic but antigenically related lagoviruses [14–17].

The experts noted that this option is likely to only be used in rare occasions and when Option 1 (detection of antigen or nucleic acid specific to pathogenic rabbit lagovirus) is not applicable. Pathogenic rabbit lagovirus generally kills an unvaccinated leporid host within hours and there is insufficient time for the host to mount an immune response and develop specific antibodies [5].

### 3.4.1. Option 1

The experts agreed that detection of either antigen or nucleic acid specific to pathogenic rabbit lagovirus is suitable for confirmation of a case, provided it is accompanied by additional evidence (presence of clinical signs or pathological lesions, or epidemiological link to suspected or confirmed case, or suspicion of previous association or contact with the virus).

## 3.5. Potential for conflict with existing WOAAH standards

### 3.5.1. WOAAH Terrestrial Manual

In 'A. Introduction' of the *WOAH Terrestrial Manual* Chapter 3.7.2. 'Rabbit haemorrhagic disease', rabbit haemorrhagic disease is stated to be 'caused by a calicivirus (genus *Lagovirus*, family Caliciviridae)...'. It is noted that the genus *Lagovirus* also contains the causative agent of a disease of the brown hare (European brown hare syndrome virus, EBHSV) but that the two viral species (RHDV and EBHSV) are distinct from each other. Later in this section there is discussion of rabbit haemorrhagic disease resulting from infections with subtype RHDVa and the new RHDV-related virus RHDV2 (initially also called RHDVb). RHDV2 is described as affecting hares as well as rabbits. A new taxonomic classification based mainly on phylogenetic relationships of viral agents belonging to the genus *Lagovirus* has been proposed [15] but has not been adopted by ICTV [18,19] who confirmed the previous classification [20]. Consequently, the current ICTV classification was used in the chapter.

**Table 1.** Test methods available for the diagnosis of rabbit haemorrhagic disease and their purpose

Method	Purpose					
	Population freedom from infection	Individual animal freedom from infection prior to movement	Contribute to eradication policies	Confirmation of clinical cases	Prevalence of infection – surveillance	Immune status in individual animals or populations post-vaccination
<b>Detection of the agent<sup>1</sup></b>						
<b>ELISA</b>	+	–	++	+++	+	–
<b>EM</b>	–	–	–	++	–	–
<b>HA</b>	–	–	–	+	–	–
<b>Real-time RT-PCR</b>	+	–	++	+++	+	–
<b>Detection of immune response</b>						
<b>C-ELISA</b>	+++	+++	+++	–	+++	+++
<b>IsoELISA</b>	++	+++	++	++	++	++
<b>HI</b>	++	++	++	–	++	++

Key: +++ = recommended for this purpose; ++ recommended but has limitations; + = suitable in very limited circumstances; – = not appropriate for this purpose.  
 ELISA = enzyme-linked immunosorbent assay; EM = electron microscopy; HA = haemagglutination test;  
 RT-PCR = reverse-transcription polymerase chain reaction; C-ELISA = competitive ELISA;  
 isoELISA = isotype ELISA; HI = haemagglutination inhibition test.

Table 1 of the *WOAH Terrestrial Manual* identifies IsoELISA as suitable ('++') for confirmation of clinical cases. However, the case definition as currently proposed does not include options for detection of immune responses, so could be considered to conflict with Table 1.

**Assessment:** The case definition as proposed may conflict with Table 1 of the *WOAH Terrestrial Manual*. In addition, it is recommended that Chapter 3.7.2 of the *WOAH Terrestrial Manual* be amended to more clearly define those entities considered to be pathogenic rabbit lagoviruses.

### 3.5.2. Terrestrial Code

Leporids—the host animals according to the case definition—are included in the order Lagomorpha, so the case definition is consistent with the categorisation used in *WOAH Terrestrial Code* Chapter 1.3. Further, Section 13 of the *WOAH Terrestrial Code* is entitled ‘Leporidae’, so this is also consistent with the case definition.

The disease-specific chapter 13.2 ‘Rabbit haemorrhagic disease’ does not include any form of case definition. It contains no provisions for leporids other than rabbits. In particular, Article 13.2.2 mentions that virological or serological surveys in both domestic and wild rabbits can confirm the absence of the disease.

In section 10.3 of its September 2021 report<sup>18</sup>, SCAD recommended that the Terrestrial Animal Health Standards Commission (Code Commission) add the revision of Chapter 13.2 to its work programme, noting that the chapter currently contains neither a case definition nor provisions for recovery of free status.

**Assessment:** Despite host species not being mentioned in Article 13.2.1, there is a possible conflict between the case definition proposed by the experts and the *WOAH Terrestrial Code* by omission (i.e. hares and *Sylvilagus* spp.) under Article 13.2.2 ‘RHD free country’. It is recommended that the provisions of Chapter 13.2 be amended to reflect the expanded host range of the case definition.

### 3.5.3. Conclusion

The case definition, once endorsed, should not be published on the WOA website but instead be forwarded to Code Commission to inform their revisions of, and for incorporation into, Chapter 13.2 of the *Terrestrial Code*. In parallel, the Biological Standards Commission will be invited to consider the issues raised and propose their resolution in their report.

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.../Appendix

**Report of the Development of the Case Definition for Infection with Pathogenic Rabbit Lagoviruses  
(Rabbit Haemorrhagic Disease)**

**Virtual, 9 to 25 August 2022**

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## Annex 8.

### Work Programme of the WOA Scientific Commission for Animal Diseases (September 2022)

#### MEETING OF THE WOA Scientific Commission for Animal Diseases

Paris, 19 to 23 September 2022

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**Abbreviations:** BSC: Biological Standards Commission; SCAD: Scientific Commission for Animal Diseases; TAHSC: Terrestrial Animal Health Standards Commission (Code Commission).

		September 2022
Update of WOA Standards		
	Glossary	Not on agenda
1	Ch. 1.2. 'Criteria for the inclusion of diseases, infections or infestations in the OIE list'	SCAD discussed examples for each criterion where problems had been identified by experts or themselves, either with the criterion or with its interpretation. SCAD proposed revisions to the guidance document aimed at improving experts' interpretation of the listing criteria. In addition, they recommended that the Listing SOP be updated such that criterion 1 is assessed internally by WOA prior to the request being presented to the DDG. At this time, no specific revisions to Chapter 1.2 are recommended, but SCAD welcomes the opportunity to be involved in the discussions when next the chapter is opened for revision. SCAD's opinion was forwarded to TAHSC for their consideration.
1	Ch. 1.3. 'Diseases, infections and infestations listed by the OIE'	SCAD does not consider the categorisation of Chapter 1.3 as being science-based, but agrees that they provide administrative convenience and provides useful guidance regarding primary species of concern, especially when there is no case definition. However, science-based case definitions should not be constrained by the existing species categorisation within Chapter 1.3.  SCAD invites TAHSC to consider SCAD's opinion and ensure consistencies between the categorization of Chapter 1.3 and the section of Volume II of the <i>Terrestrial Code</i> .  SCAD's opinion provided to TAHSC.
	Ch.8.8. Infection with foot and mouth disease virus	Not on agenda
	Ch. 8.14. 'Infection with rabies virus'	SCAD responded to the comment forwarded from TAHSC from the EU regarding their position against reducing the waiting period after antibody testing for importation of vaccinated dogs from infected countries (from 3 months to 30 days). SCAD noted that EFSA used in their model the incubation time as parameter, as explained in their report, and thus considered the waiting period initiating from time of exposure rather than time of antibody detection. SCAD emphasised the experimental data that demonstrates that rabid dogs that develop antibodies die on average 7 days

		September 2022
		after antibody detection (range 0 to 13 days). Therefore, a waiting period of at least 30 days <b>after antibody detection</b> will eliminate any residual risks of legally importing rabid dogs that are incubating the disease. The opinion was forwarded to TAHSC.
	Chapter 8.15. Infection with Rift Valley fever virus	
	Chapter 8.16. Infection with rinderpest virus	SCAD reviewed the two questionnaires, one for the recovery of free status and the other for the risk assessment of all other Members without a case, and suggested few amendments.
1	Chapter 8.X. Infection with <i>Trypanosoma evansi</i> (surra)	Not on agenda
	Ch. 11.4. Bovine spongiform encephalopathy	SCAD considered specific questions forwarded by TAHSC with regard to the listing/notifiability of atypical BSE and its consideration in the exposure assessment. See also item under listing of diseases.
	Ch. 12.1. Infection with African horse sickness virus	Not on agenda
	Ch. 12.2. Contagious equine metritis	Not on agenda
	Chapter 12.3. 'Dourine'	Not on agenda
	Ch. 12.7. Equine piroplasmiasis	Not on agenda
<b>Official animal health status recognition</b>		
1	Evaluation of Member dossiers	Not applicable. SCAD was updated on the state of play of applications submitted by Members.
2	Expert missions to Members	SCAD prioritised in-country missions to be deployed to monitor continuous compliance with the <i>WOAH Terrestrial Code</i> requirements for maintenance of official status.
2	Follow up of Members with official animal health status or with suspended status	SCAD noted the suspension of official status that occurred since its last meeting in February 2022: Indonesia (FMD), Kazakhstan (five FMD zones without vaccination, CSF), Botswana (one FMD zone without vaccination).
1	Review of annual reconfirmations	SCAD identified 48 annual reconfirmations for comprehensive review its February 2023 meeting. SCAD also agreed on a work strategy for revising the annual reconfirmation dossiers during the months prior to the February meeting.
1	Harmonisation of the requirements in the <i>WOAH Terrestrial Code</i> Chapters for recognition and maintenance of official animal health status	Not on agenda
1	Impact of revisions of BSE standards on Members' BSE risk status	SCAD considered the <i>ad hoc</i> Group report on the revision of the BSE standards and maintenance of official BSE risk status (22 to 24 June 2022) as well as the recommendations of the <i>ad hoc</i> Group of the additional

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		questions sent to two Members following the meeting of June 2022.
<b>Disease control issues</b>		
2	Advise on global strategies and initiatives (FMD, PPR, rabies, ASF)	Updates were provided on the global strategies/initiatives for PPR and ASF.
<b>Disease control issues</b>		
1	Consider non-disease-Status and non-standard-setting <i>ad hoc</i> Groups reports falling into the SCAD remit	None at this meeting.
2	Assess recent developments in control and eradication of infectious diseases	<b>Capturing genotype information in WAHIS:</b> WAHIAD advised that it is possible to activate an optional field to capture serotype/subtype/genotype information for most diseases in WAHIS, and that WAHIAD considered that doing so would support Members' disease control efforts for some diseases, while for others, WAHIAD could see little benefit to Members resulting from activation of this field. SCAD provided feedback, noting that (in general), collection of this information would be helpful to inform Members' knowledge of the epidemiology of the diseases, and to inform risk assessments. In addition, they felt that it was important that this field be activated for all listed zoonotic diseases that have severe public health impacts. SCAD disagreed with WAHIAD's assessment that activation of the field would not be useful for lumpy skin disease, and for <i>Mycobacterium tuberculosis</i> complex.
1	Evaluation of emerging diseases	<p>SCAD expressed its appreciation for the revisions made to the <b>Emerging Diseases SOP</b> (April 2022) but requested that a flowchart be developed to assist in understanding the flow of the activities.</p> <p>SCAD reviewed the information provided by WAHIAD concerning <b>three diseases</b> previously reported to WOAHA as emerging diseases. SCAD agreed that the disease events for both <i>Ehrlichia canis</i> and pigeon rotavirus should be closed in WAHIS and that there was no need to proceed to an emerging disease assessment. SCAD noted that, as a listing assessment had been conducted for porcine epidemic diarrhoea virus (decision: not to list), this disease is not an emerging disease and WAHIS should be updated accordingly. WAHIAD was advised of SCAD's decision.</p> <p><b>Monkeypox:</b> SCAD reviewed recent information and confirmed that its opinion from its August assessment that infection with monkeypox is not an emerging disease in animals was unchanged.</p> <p><b>Avian influenza (H3N8):</b> SCAD reviewed recent information and confirmed that its opinion from its August assessment that infection with avian influenza (H3N8) is not an emerging disease in animals was unchanged</p> <p><b>Infection with SARS-CoV-2:</b> SCAD determined that there was as yet insufficient information to support conducting a listing assessment for infection with this pathogenic agent, but recommended that it be retained on the Register of Emerging Diseases.</p>

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1	Evaluation of pathogenic agents against the listing criteria of Chapter 1.2.	<p>See discussion above regarding consideration of the listing criteria of Chapter 1.2, and of the categorisation used in Chapter 1.3 (and Volume II) of the <i>Terrestrial Code</i>.</p> <p><b><i>Theileria mutans</i></b>: SCAD conducted the assessment themselves during the meeting, and concluded that <i>T. mutans</i> did not meet listing criteria (2) or any of the elements of (4), so should not be added to the list.</p> <p><b>Atypical bovine spongiform encephalopathy (aBSE)</b>: at the request by TAHSC and with the agreement of the DDG (as per the listing SOP), SCAD conducted the listing assessment for this pathogenic agent. They assessed criteria 1, 2, and all components of 4 as [NO] and concluded that atypical BSE should be removed from the list.</p> <p><b><i>Streptococcus equi subsp. equi</i></b>: SCAD finalised the assessment, noting that criterion (3) had been assessed as [YES] by BSC in Feb. 2022. SCAD considered that this pathogenic agent did not meet any of the components of listing criterion (4) and concluded that it should not be added to the list. They noted that the subject-matter experts (who unanimously selected [YES] for 4 (b)) made their assessment at the level of individual, farm, or industry, and not at that of a country or zone.</p>
1	Development of case definitions	<p>SCAD commended the work on the internal processes for case definition development and noted progress made.</p> <p><b>Infection with avian metapneumovirus (turkey rhinotracheitis)</b>: the case definition was revised, discussed with BSC, and endorsed. As no conflicts were identified with either <i>WOAH Terrestrial Code</i> or <i>Manual</i>, the case definition will be placed on the website in due course.</p> <p><b>Infection with rabbit haemorrhagic disease virus</b>: the case definition was revised, discussed with BSC, and endorsed. As a potential conflict with the <i>WOAH Terrestrial Code</i> was identified, the case definition was transferred to TAHSC, and will not be published on the website in the interim.</p>
3	Insects	SCAD was updated on the key findings of the 41 <sup>st</sup> edition of the <i>WOAH Scientific and Technical Review</i> 'Safety, regulatory and environmental issues related to international trade of live insects'. A key challenge is the absence of an overarching framework for the international trade in insects. Potential actions that may be taken by WOA to improve the conditions for insect trade were outlined.
Liaison with other Specialist Commissions		
1	Terrestrial Animal Health Commission	<p><b><i>Mycobacterium tuberculosis</i> complex</b>: SCAD noted that in their meeting in Feb. 2022 TAHSC did not agree with SCAD's recommendation to expand the definition of <i>Mycobacterium tuberculosis</i> complex used by WOA for the purposes of the <i>WOAH Terrestrial Code</i> to include any member of the complex (specifically including <i>M. bovis</i>, <i>M. caprae</i> and <i>M. tuberculosis</i>) but excluding vaccine strains. SCAD noted that the listing SOP provides a pathway for</p>

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		<p>inclusion of additional strains of <i>M. tuberculosis</i> in the complex.</p> <p><b>Framework for WOAAH Terrestrial Code standards: disease-specific chapter:</b> SCAD reviewed the information provided and returned comments to TAHSC on the proposed sections for 'General Provisions' and 'Recommendations on surveillance'.</p> <p><b>Proposal for new Biosecurity chapter:</b> SCAD agreed on the need for the chapter and felt that it should be at a high level describing the overarching principles of biosecurity to support the Veterinary Authorities to enforce regulation. SCAD provided their opinion to TAHSC. [Note: TAHSC's position differed.]</p> <p><b>Requested revision of WOAAH Terrestrial Code Chapters 8.10, 12.4, 12.11:</b> SCAD noted that these chapters are very rudimentary and last updated in 2000, 1968, and 1998, respectively. SCAD agreed that the scientific evidence does not support the need to have provisions for horses for Japanese encephalitis (Article 8.10.2) but recommended that these diseases are assessed against the listing criteria to confirm they should be retained on the list prior to beginning work on revision of the chapters.</p>
1	Biological Standards Commission	BSC and SCAD met virtually soon after the SCAD meeting to discuss the work on case definitions.
Working Groups		
2	Antimicrobial Resistance Working Group	The Commission was updated on two topics: the revision of Chapter 6.10 'Responsible and prudent use of antimicrobial agents in veterinary medicine'; and the development of a technical reference document of antimicrobials of veterinary importance for swine.
2	Wildlife Working Group	The Commission provided feedback on a revised document on considerations on the vaccination of wild animals of high conservation value.
Other activities that could impact SCAD work programme		
1	Evaluation of applications for WOAAH Collaborating Centre status	None at this meeting
3	Update on the main conclusion/ recommendations of meetings relevant for the work of the Commission	None at this meeting
3	Updates provided for SCAD information	SCAD was updated on: OFFLU; STAR-IDAZ International Research Consortium; Global Burden of Animal Diseases (GBAD) programme and the WOAAH Collaborating Centre for the Economics of Animal Health; WOAAH Observatory; and WOAAH research coordination activities.
	Any other business	None at this meeting



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